

STATE OF NORTH CAROLINA
WAKE COUNTY

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
FILE NO. 17 CVS 09342

WATERKEEPER ALLIANCE,

Plaintiff,

v.

STEVEN TROXLER, as Commissioner of the
North Carolina Department of Agriculture and
Consumer Services,

Defendant.

**SETTLEMENT AGREEMENT AND
RELEASE OF CLAIMS**

WHEREAS, on January 20, 2017, Waterkeeper Alliance ("Waterkeeper") submitted a public records request to the Department of Agriculture & Consumer Services ("NCDA&CS"), asking to inspect certain records in the possession of NCDA&CS including (1) all records, including all communications with the U.S. Environmental Protection Agency, U.S. Department of Agriculture, the Federal Emergency Management Agency, any state agency, or any municipal or county government, generated as part of NCDA&CS's review of, consultation regarding, or response to flooding of animal agricultural operations in North Carolina as a result of Hurricane Matthew, and (2) all records related to any emergency response or preparedness plan, proposal, strategy, suggestion, or other response resulting from any storm-related flooding of any animal agricultural operation in North Carolina as a result of flooding from Hurricanes Matthew, Floyd, Bonnie, or Fran; and

WHEREAS, on June 7, 2017, NCDA&CS provided Waterkeeper with the Department's Production Number One, consisting of approximately 7.18 Gigabytes of responsive documents, along with an invoice of \$2,038.50 for 117.25 hours spent gathering the information Waterkeeper requested; and

WHEREAS, on July 31, 2017, Waterkeeper filed a civil action in Wake County Superior Court, designated as file number 17 CVS 09342, seeking to compel NCDA&CS to produce the public records for inspection without unlawfully charging fees; and

WHEREAS, on August 14, 2017, NCDA&CS provided Waterkeeper with the Department's Production Number Two, consisting of approximately 3.74 Gigabytes of responsive documents; and

WHEREAS, on September 6, 2017, NCDA&CS filed a motion to dismiss Waterkeeper's claims; and

WHEREAS, on September 18, 2017, NCDA&CS provided Waterkeeper with the Department's Production Number Three, consisting of approximately 3.11 Gigabytes of responsive documents; and

WHEREAS, counsel for both parties engaged in settlement negotiations in an attempt to resolve the differences between them; and

WHEREAS, Waterkeeper and NCDA&CS (hereinafter, the "Parties") now wish to avoid the costs and expense of litigation and resolve this litigation on mutually agreeable terms.

THEREFORE the Parties hereby agree as follows:

1. Policy. NCDA&CS has withdrawn the \$2,038.50 invoice and updated its public records policy to reflect that, absent a change in law, NCDA&CS will not charge any fee or special service charge for the inspection or examination of public records.

2. Continued Compliance with the Public Records Act. NCDA&CS will continue to provide Waterkeeper with access to all records requested in Waterkeeper's January 20, 2017 public records request as soon as the remaining records can be reviewed to redact confidential information. NCDA&CS will not charge any fee for the release of these documents.

3. Litigation Costs. NCDA&CS will reimburse Waterkeeper's Attorney, the Southern Environmental Law Center ("SELC"), for the \$200 filing fee associated with the commencement of this action and SELC's \$487.50 share of the mediation fee. The parties will otherwise bear their own costs and attorney's fees.

4. Donation. NCDA&CS will make a donation of \$2,000 to the Sunshine Center of the North Carolina Open Government Coalition.

5. Release. Waterkeeper does hereby fully and forever release, discharge, and waive any and all claims, causes of action, administrative claims or other demand or proceeding of any kind that it may have in relation to the public records request mentioned above. Specifically, this release applies only to the public records request dated January 20, 2017. Upon fulfillment of items 2-4 by NCDA&CS, Waterkeeper shall file a voluntary dismissal with prejudice of those claims asserted against Defendant and NCDA&CS in Wake County file number 17 CVS 09342.

6. No Admission of Liability. The undersigned agree that this Settlement Agreement and Release is a full and complete compromise settlement of a disputed claim and is intended merely to terminate any and all claims relating to the public records request and avoid litigation among the parties to this Agreement. Payment of the donation and other costs by NCDA&CS is not to be construed as an admission of liability, and NCDA&CS expressly denies that it is liable.

7. Full Cooperation. The parties agree to cooperate fully, to execute any and all supplementary documents necessary to effectuate this Agreement, and to take all additional actions that may be necessary to give full force and effect to the terms of this Agreement.

8. Entire Agreement. This Agreement contains the entire agreement between the parties and there are no understandings or agreements, verbal or otherwise, regarding this settlement except as expressly set forth herein.

9. Reading of Agreement. The parties hereby acknowledge that the individual executing the Agreement on its behalf is authorized to execute this Agreement on its behalf and to bind the respective entities to the terms contained herein and that he has read this Agreement, conferred with his attorney, fully understands its contents, consents to the settlement of the claim on the terms set forth herein, and does so in reliance upon his own judgment and advice of attorney and not in reliance on any other representations or promises of the opposing party or its representatives or attorneys.

IN WITNESS WHEREOF, this Agreement is executed in as indicated on the subsequent signature pages, this the 4th day of OCTOBER, 2017.

PARTIES

WATERKEEPER ALLIANCE

BY:



Will Hendrick
Staff Attorney

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES

BY:  _____

N. David Smith
Chief Deputy Commissioner
North Carolina Department of
Agriculture and Consumer Services

STATE OF NORTH CAROLINA
COUNTY OF CABARRUS

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
13 CVS 1815

STATE OF NORTH CAROLINA, ex rel.,
NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES,

Plaintiff,

v.

TERRY CHRISTENBURY,

Defendant.

SETTLEMENT AGREEMENT

RECITALS

Terry Christenbury (the "Defendant") and the North Carolina Department of Agriculture and Consumer Services (the "Plaintiff") desire to fully and finally settle this and all other disputes and controversies surrounding the Defendant's operation of an unlicensed slaughter facility and failure to properly dispose of animal remains, and desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

Whereas, on April 25, 2010, the Director of Plaintiff's Veterinary Division cited the Defendant for violations of G.S. § 106-403 and 02 NCAC 52C .0102;

Whereas, on December 28, 2011, the Director of Plaintiff's Meat & Poultry Inspection Division cited Defendant for violations of G.S. §§ 106-549.23 and 106-549.17;

Whereas each division director imposed the following civil penalties:

Veterinary Division: \$5,000.00;

Meat & Poultry Inspection Division: \$7,000.00;

Whereas Defendant received written notice of said civil penalties, each of which is attached hereto and hereby incorporated herein by reference as Appendices A and B;

Whereas, the sum of the civil penalty assessment was \$12,000.00;

Whereas Defendant failed to pay said civil penalties and failed to petition for a contested case hearing before the North Carolina Office of Administrative Hearings to contest the same;

Whereas, Plaintiff filed its civil complaint against Defendant for purposes of securing a judgment for said civil penalties on June 17, 2013;

Whereas, Defendant was duly served with a Summons and copy of said civil complaint, and filed a timely Answer thereto; and

WHEREAS the parties desire to resolve these matters without further litigation.

NOW THEREFORE, the parties agree as follows:

- 1) Whereas, within ten days (10) of the date both parties have signed this formal written settlement agreement, Defendant shall remove or cause to be removed all equipment and other items (hereinafter, "equipment") that can be used for the slaughter and/or processing of animals for human consumption, except for the following items:

a) _____;

b) _____;

T, C None (initial)

from 911 Reed Mine Road, Midland, NC 28107, ("Defendant's residence") and all such items will be disposed of in a lawful fashion by sale or disposal in a landfill or other appropriate facility within forty-eight hours after removal. Removal of the equipment from Defendant's residence will take place in the presence of the Plaintiff's designated representative. If the equipment is sold, Defendant shall provide the Plaintiff with the name and address of the person or company purchasing it within twenty-four hours of delivering the equipment to the purchaser. The parties further understand and agree that Defendant may use the items of equipment mentioned above only for the slaughtering or processing of animals of his own raising, and the preparation by him of the carcasses, parts thereof, meat and meat food

products of such animals exclusively for use by him and members of his household and his nonpaying guests and employees, as provided in N.C. Gen. Stat. § 106-549.27(a)(1);

- 2) Defendant hereby agrees to pay the sum of twelve thousand two hundred and fifty dollars (\$12,250.00) to the Plaintiff as consideration for this settlement agreement.

The parties agree and acknowledge that the Plaintiff is required by law to turn said payment over to the Department of Public Instruction. Defendant shall pay the Plaintiff according to the following schedule:

- a. Defendant shall pay the Plaintiff the sum of four thousand dollars (\$4,000.00) on or before May 9, 2015;
- b. Defendant shall pay the remaining balance of eight thousand two hundred fifty dollars (\$8,250.00) in forty monthly installments of two hundred dollars (\$200.00) and a final payment of two hundred fifty dollars (\$250) due on the first day of each month, sent to **"NCDA&CS, Attention Janine Owens, 1001 Mail Service Center, Raleigh, NC 27699-1001,"** beginning on that date of the month following the month in which all of the parties to this Settlement Agreement have executed this Settlement Agreement. A monthly payment is late and the Defendant is in breach of this Settlement Agreement if payment is received after 5:00 p.m. of the date due. Receipt of payment in an envelope postmarked or otherwise dated by commercial courier or the U.S. Postal Service on or before the date due, which is received after the date due, shall be deemed to be on time;

- 3) As further consideration Defendant shall sign Appendix C, a Confession of Judgment in favor of the Plaintiff for the sum of twelve thousand two hundred dollars

(\$12,250.00). The Plaintiff shall not file said Confession of Judgment with the Court unless the Defendant violates this settlement agreement by:

- a. Failing to pay the \$12,250.00 within the time and according to the terms provided in this Settlement Agreement;
- b. Failing to remove the equipment from 911 Reed Mine Road, Midland, NC 28107, by the deadline stated herein, unless Plaintiff finds that there is a good reason to grant the Defendant additional time in which to do so;
- c. Returning the equipment or other items to 911 Reed Mine Road, Midland, NC 28107, that, in the opinion of the Plaintiff's compliance officers, enables the Defendant to conduct unlicensed, uninspected slaughter there again; or
- d. Committing another violation of the laws and/or rules enforced by the Veterinary Division or the Meat and Poultry Inspection Division, specifically but not limited to Articles 49B and 49C of the North Carolina Mandatory Meat and Poultry Inspection Law, there regulations enacted thereunder, or G.S. § 106-403 and the regulations enacted thereunder.

4) Plaintiff may deem Defendant to be in breach of this Settlement Agreement upon finding:

- e. Defendant has failed to make timely payment; if Defendant finds he lacks sufficient funds to make a monthly payment, he shall notify the Plaintiff before payment is due and request that the payment be rolled over to the next month.
- f. The following month Defendant shall bring his payments up to date (paying double the usual monthly payment) unless he has received permission from the Plaintiff to pay less than double the monthly payment, \$400.00.

- g. Failure to make payment in full each month without prior notification to the Respondent shall constitute a material breach of this Settlement Agreement;
 - h. If the Plaintiff files the Confession of Judgment for such breach or any other breach of this Settlement Agreement, it shall not excuse Defendant from his continuing obligation to make monthly payments.
 - i. When it files the Confession of Judgment, the judgment shall reflect and give credit for payments made up to date of filing of the Confession of Judgment against the amount of \$12,250.00.
 - j. There is no interest charged on the unpaid balance and no penalty for early payment.
- 5) Plaintiff hereby reserves the right to forego filing Appendix C, the Confession of Judgment, against the Defendant if it finds a good reason to refrain from doing so. However, if Plaintiff in the sound exercise of its discretion refrains from filing Appendix C, this is not a waiver of its right to do so later;
- 6) Plaintiff has, contemporaneously with its execution of this Settlement Agreement, signed a Dismissal with Prejudice of the above-captioned case in the North Carolina Superior Court for Cabarrus County;
- 7) Defendant agrees not to offer any land that he owns, rents, or controls, together or separately, as a place to slaughter and/or process animals for food, except as provided by law for animals of his own raising, to be fed to his family, employees or non-paying guests;
- 8) Defendant does hereby promise and grant to the Plaintiff the right to enter the property located at 911 Reed Mine Road, Midland, NC 28107, and all other

properties that he currently owns, either jointly with others or individually, leases or has use of. Defendant shall, when he executes of this Settlement Agreement, provide to the Plaintiff a list of all the properties he currently owns, leases or has use of, both jointly with others or individually, including the properties' street address or GPS coordinates. Defendant shall provide to the Plaintiff a list of all said properties, Appendix D, which is attached hereto and incorporated herein by reference.

Plaintiff's right to enter and to inspect those properties and their buildings shall be without notice, at any time (24hours per day/7 days per week). Defendant further promises and agrees that, upon purchasing, leasing or otherwise receiving the use and/or control of any other parcels of land in the State of North Carolina after his execution of this agreement, he shall:

- k. notify the Plaintiff within forty-eight hours of receiving access to or control of said parcels of land;
- l. grant Plaintiff the same right of entry and inspection thereto; and
- m. provide the Plaintiff with the newly acquired land parcel's address or GPS coordinates.

- 9) Plaintiff hereby agrees that the right to conduct such inspections described in paragraph 9 shall not include the right to enter and inspect any building on any of the properties mentioned herein that are used solely as human habitation; and
- 10) Defendant further agrees not to commit any other violations of the North Carolina Meat and Poultry Inspection Law, articles 49B, 49C and 49H, or of G.S. § 106-403 or the regulations enacted thereunder.

In return, the Plaintiff hereby agrees as follows:

- 1) Plaintiff accepts twelve thousand two hundred and fifty dollars (\$12,250.00) in compromise of its civil penalty assessment in order to settle this matter;

- 2) Plaintiff agrees not to file Defendant's Confession of Judgment, Appendix C, unless Defendant violates this Settlement Agreement;
- 3) Plaintiff hereby agrees that, if Defendant complies with the Settlement Agreement completely and commits no violations of the North Carolina Meat and Poultry Inspection Law, its regulations or of G.S. § 106-403 and 02 NCAC 52C .0102 for from the date the Settlement Agreement is signed by both parties, until Defendant has paid the entire sum of \$12,250.00 to Plaintiff as provided above, the Plaintiff will return the original Confession of Judgment to the Defendant for cancellation unless Appendix C has been filed with the Clerk of Court of the county in which Defendant resides.

The parties mutually agree to act in good faith in the implementation of this agreement.

The parties agree to bear their own attorney's fees. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

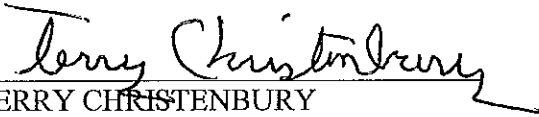
The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

North Carolina law shall govern the interpretation and enforcement of this Agreement.


IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates
indicated below:

DEFENDANT


TERRY CHRISTENBURY

Date: 5-8-2015

ATTORNEY FOR DEFENDANT


H. Jay White, Sr.

Date: 5/8/2015

ATTORNEY FOR PLAINTIFF

Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: _____

FOR PLAINTIFF

ALAN WADE
Director, Meat and Poultry Inspection Division
North Carolina Department of Agriculture & Consumers Services

Date: _____

CAROL WOODLIEF, DVM
Director, Animal Health Programs, Veterinary Division
North Carolina Department of Agriculture & Consumers Services

Date: _____

STATE OF NORTH CAROLINA
COUNTY OF CABARRUS

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
Case No.: 00 _____

STATE OF NORTH CAROLINA, ex rel.,
NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES,

Plaintiff,

v.

TERRY CHRISTENBURY,

Defendant.

JUDGMENT

Defendant now deposes and says that he is resident of Cabarrus County, North Carolina, and authorizes the Court to enter judgment in favor of Plaintiff in the sum of twelve thousand two hundred and fifty dollars (\$12,250.00), with interest from _____, 20 ____.

Defendant may become liable to Plaintiff in this amount because he entered into a Settlement Agreement with Plaintiff on May 8, 2015, 2015, to settle and resolve litigation of the case captioned State of North Carolina, ex rel. North Carolina Department of Agriculture & Consumer Services v. Terry Christenbury, case no. 13 CVS 001815, before the Superior Court of Cabarrus County. Plaintiff brought that case against the Defendant to reduce to a judgment Plaintiff's issuance of civil penalty assessments against the Defendant for having operated an unlicensed, uninspected animal slaughter and processing facility in violation of the N.C. Mandatory Meat Inspection Law, and for improper disposal of dead domesticated animals, on the land around Defendant's residence at 911 Reed Mine Road, Midland, NC 28107.

The Parties resolved the matter before the Superior Court of Cabarrus County pursuant to the above-referenced Settlement Agreement, which is attached hereto and incorporated by reference. In said Settlement Agreement the Defendant promised to comply with the referenced statutes and regulations by rendering the property and buildings unsuitable for the slaughter and processing of animals for food. Defendant also agreed in said Settlement Agreement to execute this Judgment in favor of the Plaintiff. As full and fair consideration for said promises and actions, the parties agreed that the Plaintiff would not file and execute upon this Judgment unless and until it found that the Defendant had violated the North Carolina Mandatory Meat Inspection laws, or G.S. § 106-403 or otherwise failed to comply with the terms and obligations of said Settlement agreement.

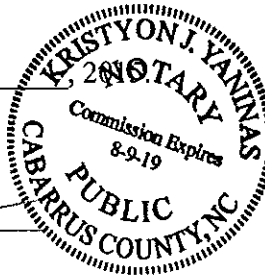
On _____, 20____, Plaintiff's officers discovered that Defendant had failed to meet his obligations under said Settlement Agreement by committing the violations set forth in the report issued by the Plaintiff, which is attached hereto and incorporated by reference.

On _____, 20____, Plaintiff's officers discovered that Defendant had failed to meet his obligations under said Settlement Agreement by failing to pay the sum of \$ _____ as promised in said Settlement Agreement, a material breach thereof and sufficient and lawful reason for Plaintiff to file this Judgment against Defendant.

Terry Christenbury
Defendant Terry Christenbury

Sworn to and subscribed before
me this 8 day of MAY

Kristyon J. Yaninas
Notary Public



Upon the foregoing confession of judgment, IT IS THEREFORE ORDERED that judgment is entered for Plaintiff against Defendants in the sum of twelve thousand two hundred fifty dollars (\$12,250.00), with interest to run from _____, 20____, together with the costs in the sum of \$ _____. Said judgment amount is reduced and Defendant is given credit for payment of the sum of \$ _____, which Plaintiff hereby acknowledges receipt of prior to filing of this Confession of Judgment.

This the _____ day of _____, 20____.

Clerk of Court

NORTH CAROLINA INDUSTRIAL COMMISSION
RALEIGH, NORTH CAROLINA

RELEASE OF TORT CLAIM UNDER GENERAL STATUTE's 143-291 *et seq.*
I.C. File No. TA-27250; A.G. File No. TC-18-02546

KNOW ALL MEN BY THESE PRESENTS, That I, BEGONA M. KENDALL (Plaintiff), being over 18 years of age, for the sole consideration of \$626.96 (Six hundred and twenty-six dollars and ninety-six cents), to be paid by the State of North Carolina and the North Carolina Forest Service, the payment whereof being made under the provisions of General Statutes 143-291 *et seq.*, do hereby release and discharge and by these presents do for myself, ourselves, my, our heirs, executors, administrators and assigns release and forever discharge the State of North Carolina, the North Carolina Forest Service, and their current and former officers, employees, servants, and agents, individually and officially, including but not limited to, Carla Hunt, and all other persons and entities, of and from any and all claims, demands, damages, actions, and causes of action of whatever kind or nature, on account of the incident complained of in Plaintiff's Affidavit that occurred at approximately 1:30 p.m. on the 29th day of August, 2018, at or near the parking lot at Jordan Lake State Educational Forest, which is located at 2832 Big Woods Road, Chapel Hill, Chatham County, North Carolina 27517.

Plaintiff also acknowledges and agrees that all medical bills or other expenses of any kind or nature whatsoever incurred as a result of injuries sustained in said incident have been paid or will be paid out of these proceeds and Plaintiff agrees to indemnify and hold harmless the parties released hereby from any claims by any person or entity seeking the recovery of unpaid medical bills and other expenses. Plaintiff further acknowledges that no lien by any third party exists on the proceeds of this settlement, or that if any valid lien exists, Plaintiff agrees to pay the lien out of proceeds of this settlement, and agrees to indemnify and hold harmless the parties being released from any claims by any person or entity seeking the recovery of or enforcement of such liens.

Plaintiff further hereby agrees to indemnify and save harmless the released parties of and from any and all claims of any sort from any party claiming to be subrogated or to have any other type of legal or equitable claim to the proceeds or any part of the proceeds paid in exchange for this release. This indemnification extends to and includes indemnification from all costs and attorney fees that might be incurred as a result of such claim.

Plaintiff understands that this release is made as compromise to avoid expense and to terminate all controversy and/or claims for injuries or damages of whatever nature, known or unknown, including future developments thereof, in compromise of a disputed claim, and it is therefore specifically agreed that this release shall be a complete bar to all claims or suit for injuries or damages of whatsoever nature resulting or to result from said incidents. Plaintiff hereby agrees to file a Notice of Voluntary Dismissal with Prejudice of this action within 15 days of the receipt of the proceeds of this settlement.

IN WITNESS WHEREOF, We, have hereunto set my, our, hand(s), this 19th day of November, 2018.

Defendant's Attorney


Zachary Padgett

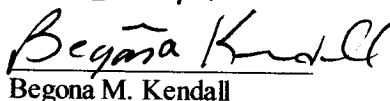
NC DOJ

P.O. Box 629

Raleigh, NC 27602

State Bar #46610

Plaintiff *m.*


Begona M. Kendall

18-02349

RELEASE FOR PROPERTY DAMAGE ONLY

I Brenda Hackney for myself, my heirs, executors, administrators, successors, and assigns in consideration of the payment of \$796.50. I do hereby remise, release, and forever discharge The State of North Carolina, the N.C. Department of Agriculture and Consumer Services, and the N.C. State Fairgrounds, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of damage to property arising out of an incident which occurred on or about the 30th day of July 2018 near 1025 Blue Ridge Road, Raleigh in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows :

\$ 796.50 To: Brenda Hackney

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/WE have signed this Release at SECU in the State of NC this 26 day of December, 2018.

IN THE PRESENCE OF

X Michael Carter Witness Name

X 2700 Macedonia Rd. Witness Address

X Cary, NC, 27518 City/State/Zip

X BREND A HACKNEY Print Name

X Brenda Hackney Signature

X 402 Wrentham St Address

X Cary, NC 27529 City/State/Zip

[REDACTED] Social Security #

AGREED TO:

Agency: N.C. Department of Justice

By: Shelly W. Long

STATE OF NORTH CAROLINA

COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF)
AGRICULTURE AND CONSUMER)
SERVICES, STRUCTURAL PEST)
CONTROL AND PESTICIDES DIVISION,)

Complainant,)

v.)

BRYAN C. HEATH,)

Respondent.)

BEFORE THE NORTH CAROLINA
STRUCTURAL PEST CONTROL
COMMITTEE

File No. SPE14-5

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. §§ 150B-22 and 150B-41(c) which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, and subject to final approval by the North Carolina Structural Pest Control Committee ("Committee"), this Settlement Agreement is made between the Structural Pest Control and Pesticides Division of the North Carolina Department of Agriculture and Consumer Services, herein referred to as Complainant, and Bryan C. Heath, hereinafter referred to as Respondent.

1. At all times pertinent to this matter, Respondent held Structural Pest Control License Number 1136PW which was registered to his business address at Heath Pest Control, 3915 Welch Street, Suite 102, Kitty Hawk, Dare County, North Carolina.
2. JMI & Associates Insurance Services notified the Structural Pest Control and Pesticides Division that Heath Pest Control's insurance was cancelled on January 25, 2014, for nonpayment of premium.
3. Heath Pest Control obtained insurance from SIA Group effective March 6, 2014.
4. On April 4, 2014, Complainant's Field Inspector performed a records inspection at Heath Pest Control. During the inspection, Complainant's Field Inspector reviewed invoices and determined that during the lapse in insurance coverage, Heath Pest Control performed 165 pest control treatments and 2 termite pretreatments.
5. From February 3, 2014, through February 7, 2014, and March 1, 2014, through March 4, 2014, Heath Pest Control billed 5,800.00.

6. As a result of its investigation, Complainant alleges that Respondent, either by act or omission, violated the following provision(s) of the North Carolina Structural Pest Control Law and/or Regulations:

N.C. Gen. Stat. § 106-65.25 Phases of structural pest control; prohibited acts; license required; exceptions.

(b) It shall be unlawful for any person to:

- (1) Advertise as, offer to engage in, or engage in or supervise work as a manager, owner, or owner-operator in any phase of structural pest control or otherwise act in the capacity of a structural pest control licensee unless the person is licensed pursuant to this Article or has engaged the services of a licensee as a full-time regular employee who is responsible for the structural pest control performed by the company. A license is required for each phase of structural pest control.

02 NCAC 34 .0902 FINANCIAL RESPONSIBILITY

(a) A licensee shall obtain and maintain financial responsibility in the form of a general liability insurance policy which covers operations in progress and completed operations. The insurance policy must provide coverage for all employees that work for the licensee. If an insurance policy is issued to a structural pest control company that employs more than one licensee and the policy otherwise meets the standard set forth in this Rule, all licensees employed by the structural pest control company will be deemed to have insurance.

(e) The license applicant shall be responsible for the submission of the Certificate of Insurance to the Division as specified in Paragraphs (c) and (d) of this Rule. No license shall be issued, reissued, or renewed until said Certificate of Insurance is received by the Division.

(f) The insurance policy(s) shall be with companies licensed, or otherwise approved to do business in North Carolina, by the NC Department of Insurance. The insurance policy shall be in full force and effect during the entire period covered by the license certificate. The license shall expire upon:

- (3) expiration of the policy.

7. Each of the above violations of the North Carolina Structural Pest Control Law and/or Regulations is subject to a civil penalty which may be assessed by the Committee as follows:

N.C. Gen. Stat. § 106-65.41 Civil penalties.


A civil penalty of not more than two thousand dollars (\$2,000) may be assessed by the Committee against any person for any one or more of the causes set forth in G.S. 106-65.28(a)(1) through (12) and G.S. 106-65.28(a)(14) and (15), or who violates or directly causes a violation of any provision of this Article or any rule adopted pursuant to this Article.

8. The parties are willing to accept a settlement of the dispute between them. This Agreement is made in order completely and finally to resolve the parties' claims and differences as stated above upon the following conditions:

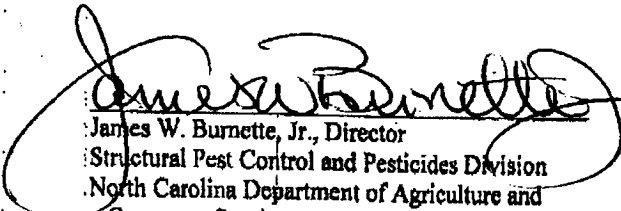
- (a) That Respondent shall pay the sum of eight hundred dollars (\$800.00) to the North Carolina Department of Agriculture and Consumer Services within thirty (30) days of the Committee's approval of this Agreement;
- (b) That Respondent agrees that if Respondent fails to pay the agreed upon sum of eight hundred dollars (\$800.00) within thirty (30) days of the Committee's approval of this Agreement, this Agreement shall constitute a civil penalty assessment of the Committee of eight hundred dollars (\$800.00) for violations of the above-stated North Carolina Structural Pest Control Law and Regulations; failure to pay the civil penalty may subject Respondent to criminal and/or additional administrative charges;
- (c) That Respondent acknowledges his right to a hearing before the Committee of the civil penalty assessment in paragraph 8(b) and waives that right by consenting to the terms of this Agreement. Respondent further agrees that the collection procedures outlined in N.C. Gen. Stat. § 106-65.41 may be instituted based on the civil penalty assessment contained in paragraph 8(b) of this Agreement;
- (d) That Respondent acknowledges that, upon acceptance and execution of this Agreement by the Committee, the Agreement shall become public record within the meaning of Chapter 132 of the North Carolina General Statutes and shall be subject to public inspection and dissemination pursuant to the provisions thereof;
- (e) That Respondent acknowledges that this Settlement Agreement constitutes full and fair written notice from the Committee, as provided in G.S. 106-65.33(a), that in the event that the Respondent commits any further violation of the Structural Pest Control Act, G. S. 106-65.22 et seq., then the Court in any prosecution of the Respondent for such violations may determine that each day during which Respondent's violation continued or is repeated constitutes a separate violation subject to punishment as a Class 2 misdemeanor.

WHEREFORE, the parties to this action hereby notify the Committee that it will be unnecessary to hold a hearing regarding this matter and respectfully request approval of this Settlement Agreement.

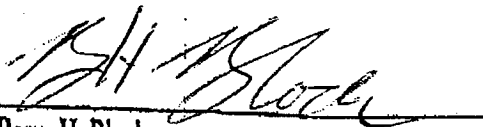
BY CONSENT:


Bryan C. Heath
Heath Pest Control, Inc.
3915 Welch Street, Suite 102
Kitty Hawk, NC 27949

5-15-15
Date


James W. Burnette, Jr., Director
Structural Pest Control and Pesticides Division
North Carolina Department of Agriculture and
Consumer Services
1090 Mail Service Center
Raleigh, NC 27699-1090

5/18/2015
Date

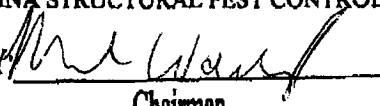

Barry H. Bloch
Assistant Attorney General
North Carolina Department of Justice
P.O. Box 629
Raleigh, NC 27602-0629

5/19/2015
Date

APPROVED AND ORDERED FILED,

this the 19 day of May, 2015.

NORTH CAROLINA STRUCTURAL PEST CONTROL COMMITTEE

BY 
Chairman

STATE OF NORTH CAROLINA

COUNTY OF PERQUIMANS

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, STRUCTURAL PEST
CONTROL AND PESTICIDES DIVISION

IR: 16-083

IN THE MATTER OF BRYSON J. COOPER.;

SETTLEMENT AGREEMENT

RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of James W. Burnette, Jr, appearing below on page 3, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter, "Department") and Bryson J. Cooper. (hereinafter "Mr. Cooper").

WITNESSETH:

WHEREAS, at all times relevant to this matter, Mr. Cooper held North Carolina Aerial Pesticide Applicator (Pilot) License No. 027-803 and was employed with Craft Air Services.

WHEREAS, on September 30, 2016, the Department received a complaint of an aerial pesticide application to an adjacent cotton field drifting onto a car as it passed by on Body Road, near Wood Church Road, in Hertford, Perquimans County, North Carolina on September 28, 2016. The Department's inspector interviewed Mr. Cooper and he stated that on said date, he applied Klean-Pic 500 SC, Folex 6 EC, and Superboll to defoliate the cotton and that he probably drifted some defoliant into the right of way but did not think that he sprayed any vehicles. The investigation revealed that Mr. Cooper violated NCGS 143-443(b)(3), NCGS 143-456(a)(2)(4)(5), and 02 NCAC 09L.1005.

WHEREAS, A civil penalty of not more than two thousand dollars (\$2,000.00) may be assessed by the North Carolina Pesticide Board against any person who violates or directly causes a violation of any provision NCGS 143-469(b).

WHEREAS, the Department has requested that Mr. Cooper pay a civil penalty in the sum of Three Thousand Two Hundred Dollars (\$3,200.00) as a result of said violations. The Department and Mr. Cooper desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

NOW, THEREFORE, IT IS RESOLVED that, in consideration of Mr. Cooper's promise to pay to the Department the sum of Three Thousand Two Hundred Dollars (\$3,200.00) in sixteen equal monthly payments of \$200.00, according to the terms set forth below, and Department hereby agrees to release Mr. Cooper from any and all liability arising out of the dispute upon receipt of the final payment, and for other good

and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Mr. Cooper shall pay the sum stated above in sixteen equal payments of \$200.00. Each payment shall be due and payable on the fifteenth of the month, **with the first payment due on May 15, 2018**. The Department shall deem Mr. Cooper's monthly payment as being received timely if Mr. Cooper sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the fifteenth day of the month in which that payment is due, properly addressed to Janine McLawhorn, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Cooper agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Mr. Cooper complies with the terms of this Settlement Agreement, the Department shall forebear from bringing a civil action against Mr. Cooper to collect the sum of money he received under the above-mentioned agreement, and shall forebear from filing the Confession of Judgment Mr. Cooper has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, Appendix I, only if Mr. Cooper fails to make a monthly payment on time, after giving Mr. Cooper notice, by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. Cooper three business days to cure his breach by paying the amount due in full.
4. The Department further agrees that, once Mr. Cooper has paid his final monthly payment and Department has received Three Thousand Two Hundred Dollars (\$3,200.00) in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Cooper a document confirming receipt of payment and releasing Mr. Cooper from further liability on this agreement and account. Further, the Department shall provide Mr. Cooper with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Cooper's breach of this Settlement Agreement.
5. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.
6. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
7. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations and agreements are merged in this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
8. The parties attest that this Settlement Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.

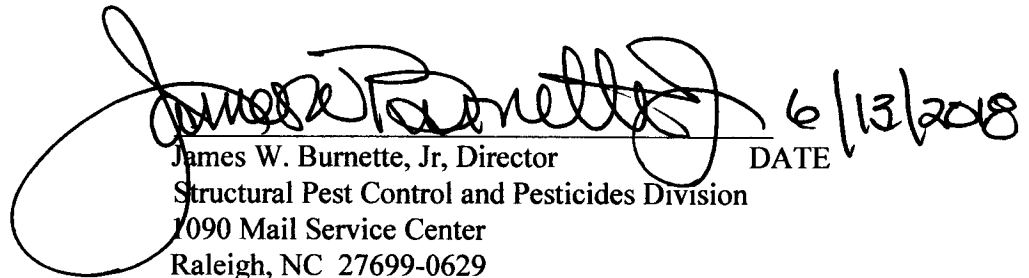
9. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:



Bryson J. Cooper
Craft Air Services
865 Swamp Road
Hertford, NC 27944

DATE



James W. Burnette, Jr, Director
Structural Pest Control and Pesticides Division
1090 Mail Service Center
Raleigh, NC 27699-0629

DATE



Christopher R. McLennan
Assistant Attorney General
N. C. Department of Justice
PO BOX 629
Raleigh, NC 27602-0629

DATE

STATE OF NORTH CAROLINA

COUNTY OF RANDOLPH

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, VETERINARY DIVISION

IN THE MATTER OF CHARLES EUGENE SMITH AND VICTORIA PRICE SMITH

SETTLEMENT AGREEMENT AND RELEASE
RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of R. Douglas Meckes, appearing below on page three (3), by and between the North Carolina Department of Agriculture & Consumer Services ("NCDA&CS") and Charles Eugene Smith and Victoria Price Smith ("Mr. and Ms. Smith").

WITNESSETH:

WHEREAS, on February 6, 2018, NCDA&CS was contacted by Cindy Bodie ("Ms. Bodie") from the Ohio Department of Agriculture ("ODA") regarding potential interstate movement of six (6) white-tail deer from Ohio to North Carolina. Ms. Bodie, on behalf of ODA, requested NCDA&CS to investigate and determine the location and status of the animals.

WHEREAS, Ms. Bodie provided NCDA&CS with a livestock auction sales invoice from Mt. Hope Auction, P.O. Box 82, Mt. Hope, Ohio 44660, showing that Ms. Smith of 2818 Refuge Church Drive, Trinity, North Carolina 27370, purchased six (6) whitetail deer on September 15, 2017.

WHEREAS, a search by the North Carolina Wildlife Resources Commission ("WRC") pursuant to a search warrant issued by the Superior Court of Randolph County of the premises located on and near 2818 Refuge Church Drive, Trinity, North Carolina 27370, and interview with Mr. Smith on February 20, 2018, revealed that Mr. and Ms. Smith transported the six (6) whitetail deer purchased from Ohio to North Carolina.

WHEREAS, whitetail deer are susceptible to Chronic Wasting Disease ("CWD") and until the United States Department of Agriculture has adopted an approved method of testing for CWD in living cervids, under N.C. Gen. Stat. § 106-549.97(a2), cervids susceptible to Chronic Wasting Disease shall not be imported into North Carolina.

WHEREAS, the six (6) whitetail deer were imported from a county in which CWD has been diagnosed or from a county which is contiguous to a county in which CWD has been diagnosed in violation of 02 NCAC 52B .0213(a).

WHEREAS, Mr. and Ms. Smith failed to obtain the required interstate certificate of veterinary inspection for the six (6) whitetail deer in violation of 02 NCAC 52B .0213(b)(1).

WHEREAS, Mr. and Ms. Smith imported the six (6) whitetail deer into North Carolina without an importation permit as required by 02 NCAC 52B .0213(b)(3).

WHEREAS, NCDA&CS has issued a civil penalty in the amount totaling thirty thousand dollars (\$30,000.00) against Mr. and Ms. Smith, hand delivered on April 20, 2018.

WHEREAS, NCDA&CS and Mr. and Ms. Smith desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above described claim and dispute.

NOW, THEREFORE, IT IS RESOLVED that, in consideration of Mr. and Ms. Smith's cooperation with NCDA&CS' investigation, NCDA&CS has agreed to reduce the civil penalty from thirty thousand dollars (\$30,000.00) to six thousand dollars (\$6,000.00).

IT IS FURTHER RESOLVED that, in consideration of Mr. and Ms. Smith's promise to pay NCDA&CS the sum of twelve hundred dollars (\$1,200.00) in twelve (12) equal monthly payments of one hundred dollars (\$100.00), according to the terms set forth below, and their promise to comply with all NCDA&CS laws and regulations and have no additional civil penalties from NCDA&CS on or before June 15, 2023, NCDA&CS will waive the remaining balance of four thousand and eight hundred dollars (\$4,800.00). However, if Mr. and Ms. Smith fail to make timely payments or receives any additional civil penalties from NCDA&CS on or before June 15, 2023, then any remaining balance of the six thousand dollars (\$6,000.00) will be due immediately. The following are the terms agreed to:

1. Mr. and Ms. Smith shall pay the sum stated above in twelve (12) equal payments of one hundred dollars (\$100.00). Each payment shall be due and payable on the fifteenth (15th) of the month, **with the first payment due on June 15, 2018**. NCDA&CS shall deem Mr. and Ms. Smith's monthly payment as being received timely if Mr. and Ms. Smith send their payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the fifteenth (15th) day of the month in which that payment is due, properly addressed to Janine McLawhorn, North Carolina Department of Agriculture and Consumer Services, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. Mr. and Ms. Smith agree to comply with all NCDA&CS laws and regulations and have no additional civil penalties from NCDA&CS on or before June 15, 2023. If Mr. and Ms. Smith receive any civil penalties from NCDA&CS on or before June 15, 2023, NCDA&CS reserves the right to collect against Mr. and Ms. Smith the remaining balance of the unpaid six thousand dollar (\$6,000.00), which shall be due immediately upon breach of this Settlement Agreement.
3. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. and Ms. Smith agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
4. NCDA&CS hereby agrees that, so long as Mr. and Ms. Smith comply with the terms of this Settlement Agreement, NCDA&CS shall forebear from bringing a civil action against Mr. and Ms. Smith to collect the balance of the six thousand dollar (\$6,000.00) civil penalty, and shall forebear from filing the Confession of Judgment Mr. and Ms. Smith have executed and provided to NCDA&CS. Furthermore, NCDA&CS agrees that it will file the Confession of Judgment, Appendix I, only if Mr. and Ms. Smith fail to make a monthly payment on time, after giving Mr. and Ms. Smith notice, by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. and Ms. Smith three (3) business days to cure their breach by paying the monthly amount due in full, or if Mr. and Ms. Smith receive any additional civil penalty from NCDA&CS on or before June 15, 2023.
5. NCDA&CS further agrees that, once Mr. and Ms. Smith have paid their final monthly payment and NCDA&CS has received twelve hundred dollars (\$1,200.00) in satisfaction of the terms of this Settlement Agreement, NCDA&CS shall provide to Mr. and Ms. Smith a document confirming receipt of payment.

IN WITNESS WHEREOF, the Defendants have hereunto set his or her hand and seal.

Charles Eugene Smith
Charles Eugene Smith

Victoria Price Smith
Victoria Price Smith

Sworn to and subscribed before
me this 7 day of May, 2018.

Brandi L. Ford
Notary Public



My Commission Expires: 9-11-2021

Upon the foregoing Confession of Judgment, IT IS THEREFORE ORDERED that judgment is entered for Plaintiff against Defendants in the sum six thousand dollars (\$6,000.00), with credit for payments made prior to Defendants' breach of the Settlement Agreement, as reflected below, with interest to run on the unpaid balance from June 15, 2018, together with the costs in the sum of \$ _____. Defendants are given credit for payment in the sum of \$ _____, which Plaintiff hereby acknowledges receipt of prior to filing of this Confession of Judgment.

This the _____ day _____, 20____.

Clerk of Court

APPENDIX I

**IN THE GENERAL COURT OF JUSTICE
DISTRICT COURT DIVISION
Case No.:**

Defendants.

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CONFESSION OF JUDGMENT

On _____, 20____, Plaintiff discovered that Defendants have failed to meet their obligations under the Settlement Agreement by failing to make the monthly payments as set forth in the Settlement Agreement or receive an additional civil penalty from NCDA&CS on or before June 15, 2023.

[SEE PAGE TWO]

6. NCDA&CS further agrees that if Mr. and Ms. Smith comply with the terms of this Settlement Agreement and receive no additional civil penalties from NCDA&CS on or before June 15, 2023, then NCDA&CS shall provide to Mr. and Ms. Smith a letter confirming their compliance with this Settlement Agreement and release them from further liability for this civil penalty.

7. Furthermore, if Mr. and Ms. Smith comply with the terms of this Settlement Agreement and receive no additional civil penalties from NCDA&CS on or before June 15, 2023, then NCDA&CS shall provide Mr. and Ms. Smith with the original of Appendix I unless NCDA&CS has already filed Appendix I with a complaint by reason of Mr. and Ms. Smith's breach of this Settlement Agreement.


8. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.


9. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.


10. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations and agreements are merged in this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.

11. The parties attest that this Settlement Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.

12. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.


Charles Eugene Smith DATE
2818 Refuge Church Drive
Trinity, NC 27370


Victoria Price Smith DATE
2818 Refuge Church Drive
Trinity, NC 27370

 05/22/2018

R. Douglas Meckes DATE
State Veterinarian
NCDA&CS Veterinary Division
1030 Mail Service Center
Raleigh, NC 27699-1030

STATE OF NORTH CAROLINA

COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, EMERGENCY PROGRAMS
DIVISION

IN THE MATTER OF CHARLES

THOMAS GUY

SETTLEMENT AGREEMENT
RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of Sharron Stewart, Director of the Emergency Programs Division appearing below on page 2, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter, "Department") and Mr. Charles Thomas Guy, (hereinafter "Mr. Guy).

WITNESSETH:

WHEREAS, the Department has determined that Mr. Guy is indebted to the Emergency Programs Division in the sum of Six Hundred Forty-Eight Dollars and Seventy-Two Cents (\$648.72). Said sum constitutes reimbursement for 1908 unauthorized miles encumbered on a state owned vehicle at the average motor fleet rate for a permanently assigned passenger vehicle of thirty-four (0.34) per mile.

WHEREAS, the Department has requested that Mr. Guy repay the sum of Six Hundred Forty-Eight Dollars and Seventy-Cents (\$648.72).

NOW, THEREFORE, IT IS RESOLVED that, Mr. Guy has agreed and promises to pay to the Department the sum of Six Hundred Forty-Eight Dollars and Seventy-Cents (\$648.72) in twelve (12) equal monthly payments of \$54.06, according to the terms set forth below.

1. Mr. Guy shall pay the sum stated above in twelve (12) equal payments of \$54.06. Each payment shall be due and payable on the 1st day of the month, **with the first payment being due on June 1, 2016**. Said payments may be hand delivered or mailed to Janine Owens, North Carolina Department of Agriculture and Consumer Services, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Guy agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department further agrees that, once Mr. Guy has paid his final monthly payment and Department has received Six Hundred Forty-Eight Dollars and Seventy-Two Cents

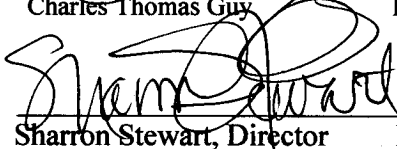
(\$648.72) in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Guy a document confirming receipt of payment.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:



Charles Thomas Guy

DATE 4/13/16



Sharron Stewart, Director

DATE 04.13.16

Emergency Programs

Mail Service Center

Raleigh, NC 27699-1614

RELEASE FOR PROPERTY DAMAGE ONLY

I/We Christopher Aloia for myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$435.00. I/We do hereby remise, release, and forever discharge The State of North Carolina, the NC State Fairgrounds his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of damage to property arising out of an accident which occurred on or about the 14th day of October, 2016 near NC State Fairgrounds, Raleigh in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows :

\$ 435.00 To: Christopher Aloia

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/WE have signed this Release at Trenton in the State of North Carolina this 19th day of April, 2017.

IN THE PRESENCE OF

JASON NEWBOLD Witness Name
5519 Hwy 41 WEST Witness Address
Trenton, NC 28585 City/State/Zip

Christopher Aloia Print Name
Christopher Aloia Signature
108 Ralph Banks Rd Address
Trenton NC 28585 City/State/Zip
[REDACTED] Social Security #

AGREED TO:

Agency: N.C. Department of Justice

By: Shelly W. Remy

STATE OF NORTH CAROLINA

COUNTY OF WAKE

BEFORE THE NORTH CAROLINA
PESTICIDE BOARD
File No. IR2014-046

NORTH CAROLINA DEPARTMENT OF)
AGRICULTURE AND CONSUMER)
SERVICES, STRUCTURAL PEST)
CONTROL AND PESTICIDES DIVISION,)

Complainant,

v.

CLAUDE EURE,

Respondent.

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. §§ 150B-22 and 150B-41(c) which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, and upon final approval by the North Carolina Pesticide Board (Board), this Settlement Agreement is made between the Structural Pest Control and Pesticides Division of the North Carolina Department of Agriculture and Consumer Services, Complainant, and Claude Eure, Respondent.

1. At all times pertinent to this matter, Respondent Claude Eure was an Aerial Applicator (License No. 027-849) for Eastern Flying Services located at 1191 Dover Fort Barnwell Road, Dover, North Carolina 28526.
2. On July 18, 2014, Complainant's Inspector Michael A. Mitchell responded to a complaint by Mr. Douglas F. Philipps of 10900 U.S. Highway 17 North in Vanceboro, North Carolina. Mr. Philipps was concerned that there could be damage to his property from an aerial pesticide application made to the corn field adjacent to his residence.
3. Complainant's Inspector questioned Mr. Philipps who confirmed that he did not actually witness the pesticide drift onto his property during the application. He did experience a strong smell from the applied pesticide.
4. On July 21, 2014, after further investigation, Complainant's Inspector determined that the Respondent made the aerial application. Respondent's pesticide application records that Complainant's Inspector obtained reported that Respondent applied Quilt Xcel to the field in question.
5. Complainant's Inspector obtained the following samples of the affected areas for analysis:

- MM-001 Approximately two pounds of vegetation taken from a camellia bush 31 feet south of Mr. Philipps' house and 158 feet south of the corn field north of Mr. Philipps' house.
- MM-002 Approximately two pounds of vegetation taken from a crepe myrtle tree 54 feet north east of Mr. Philipps' house and 12 feet south of the same corn field.
- MM-003 Approximately two pound of vegetation taken from a bald cypress tree 49 feet north of the corn field to the south of Mr. Philipps' house and 56 feet south of the propane tank and 71 feet east of Mr. Philipps' garage.
- MM-004 Approximately two pounds of vegetation taken from the grass in the west right of way of US Hwy 17 N 7.5 feet from the center line and 149 feet north of the utility pole on the corner of Mr. Philipps' property.
- MM-005 Approximately two pounds of vegetation taken from the grass in the west right of way of US Hwy 17 N 10 feet from the center line and 139 feet north of the utility pole and 25 feet west of Mr. Nobles corn.
- MM-006 Approximately two pounds of vegetation taken from Mr. Nobles' corn field 240 feet north of Mr. Philipps' yard and 240 feet east of US Hwy 17 N.

6. Complainant's Inspector received the following lab results for the samples taken:

		<u>Azoxystrobin</u>	<u>Propiconazole</u>
MM-01	Camellia bush vegetation 31' SW of Philipps' house	2.530 ppm	2.270 ppm
MM-02	Crepe Myrtle vegetation, 54' NE of Philipps' house	7.740 ppm	6.510 ppm
MM-03	Bald Cypress vegetation, Philipps' property	0.365 ppm	0.258 ppm
MM-04	Vegetation, West R-O-W of Hwy 17 N	6.990 ppm	4.230 ppm
MM-05	Vegetation, East R-O-W of Hwy 17 N	11.100 ppm	5.290 ppm
MM-06	Target vegetation, Nobles' cornfield	11.900 ppm	8.430 ppm

7. The Complainant's Inspector identified the following pesticides involved:

Quilt Xcel Fungicide (azoxystrobin, propiconazole), EPA Reg. No. 100-1324, a strobilurin/triazole fungicide, Class II, Warning.

8. Complainant's Inspector identified the following label statement from the pesticide involved:

Quilt Xcel Fungicide:

"DIRECTIONS FOR USE ...

Spray Drift Management: To avoid spray drift, do not apply when conditions favor drift beyond the target area. ... **ATTENTION** ... DO NOT spray when conditions favor drift beyond area intended for application. ...

MIXING AND APPLICATION METHODS ... Application Instructions ... Do not apply in a manner that will result in exposure to humans or animals."

9. As a result of its investigation, Complainant alleges that Respondent, either by act or omission, violated the following provisions of the North Carolina Pesticide Law and/or Regulations:

N.C.G.S. §143-443 (b)(3) ----

It shall be unlawful for any person to use any pesticide in a manner inconsistent with its labeling.

N.C.G.S. §143-456(a) (2) and (5) ---

"The Board may deny, suspend, modify, or revoke a license issued under this Part if it finds that the applicant or licensee or his employee has committed any of the following acts, each of which is declared to be a violation of this Part:

Made a pesticide recommendation or application not in accordance with the label registered pursuant to this Article;

Violated any provision of this Article or of any rule or regulation adopted by the Board or any lawful order of the Board;"

NCAC 09L .1005 (c) & (e)

"No pesticide shall be deposited by aircraft on the right-of-way of a public road or within 25 feet of the road, whichever is the greater distance.

No pesticide shall be deposited within 100 feet of any residence."

10. Each of the above violations of the North Carolina Pesticide Law and/or Regulations is subject to a civil penalty which may be assessed by the Pesticide Board as follows:

N.C. Gen. Stat. § 143-469(b)---

A civil penalty of not more than two thousand dollars (\$2,000.00) may be assessed by the Board against any person who violates or directly causes a violation of any provision of this Article or any rule adopted pursuant to this Article.

11. The parties are willing to accept a compromise and settlement of the dispute between them and this Agreement is made in order to completely and finally resolve their claims and differences as stated herein upon the following conditions:


- (a) That Respondent agrees to pay the sum of One Thousand Two Hundred Dollars (\$1,200.00) to the North Carolina Department of Agriculture and Consumer Services. Respondent shall pay One Thousand Two Hundred Dollars (\$1,200.00) in six (6) payments of Two Hundred Dollars (\$200.00) each. Respondent's first payment of Two Hundred Dollars (\$200.00) shall be due within thirty (30) days of the date the Board approves this Agreement. Respondent's remaining five (5) installment payments shall be due at sixty (60) day intervals, with the second payment falling due sixty (60) days after Respondent's first payment becomes due. Each subsequent payment shall be due sixty (60) days after its preceding payment. Respondent's payments shall be considered to have been paid on time

if Respondent sends the payment by U.S. Postal Service First Class Mail, or other commercial carrier, prepaid, and the envelope is postmarked on or before the date when the payment is due. Respondent's failure to fulfill his agreement to pay One Thousand Two Hundred Dollars (\$1,200.00) as provided herein may subject him to further disciplinary action as provided by G.S. § 106-65.28;

- (b) That Respondent acknowledges his right to a formal hearing to resolve this matter and waives said right by consenting to the terms of this Agreement;
- (c) That Respondent agrees that if he fails to pay the total agreed upon sum of One Thousand Two Hundred Dollars (\$1,200.00) per the payment installment plan, with the first payment received within thirty (30) days of the Board's approval of this Agreement, this Agreement will constitute a civil penalty assessment of the Board of One Thousand Two Hundred Dollars (\$1,200.00) for violations of the above-stated North Carolina Pesticide Law and Regulations;
- (d) That Respondent acknowledges his right to judicial review of the civil penalty assessment in paragraph 11(c) and waives said right by consenting to the terms of this Agreement. Respondent further agrees that the collection procedures outlined in N.C. Gen. Stat. § 143-469(c) may be instituted based on the civil penalty assessment contained in paragraph 11(c) of this Agreement.

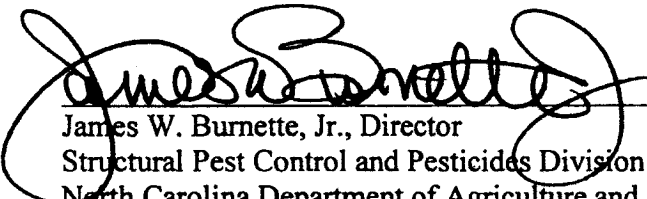
WHEREFORE, the parties to this action hereby notify the Board that it will be unnecessary to hold a hearing regarding this matter and respectfully request approval of this Settlement Agreement.

BY CONSENT:



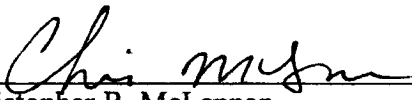
Claude Eure
4101 Walden Crossing Drive
Canton, Georgia 30115

Feb 23, 2016
Date



James W. Burnette, Jr., Director
Structural Pest Control and Pesticides Division
North Carolina Department of Agriculture and
Consumer Services
1090 Mail Service Center
Raleigh, North Carolina 27699-1090

3/7/2016
Date



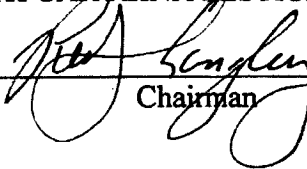
Christopher R. McLennan
Assistant Attorney General
North Carolina Department of Justice
Post Office Box 629
Raleigh, North Carolina 27602-0629

3/1/2016
Date

APPROVED AND ORDERED FILED,

this the 10th day of May, 2016.

NORTH CAROLINA PESTICIDE BOARD

BY: 

Chairman



Paid in Full
6/14/2018 gm

STATE OF NORTH CAROLINA
COUNTY OF MADISON

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES DIVISION OF SOIL AND
WATER CONSERVATION

IN THE MATTER OF WILLIAM VADER AND
CLAUDIA VADER;
AGREEMENT FOR WOODLAND PLAN SERVICES,
PROJECT NUMBER: 6652

SETTLEMENT AGREEMENT
RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of Janine McLawhorn, appearing below on page three, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter the "Department") and William Vader and Claudia Vader (hereinafter "Mr. and Mrs. Vader").

WITNESSETH:

WHEREAS, on July 25, 2016, Mr. and Mrs. Vader entered into a contract for services with the North Carolina Forest Service (hereinafter "NCFS"), bearing Project Number 6652 (hereinafter the "agreement") for the development of a woodland plan and map tailored to Mr. and Mrs. Vader's management objectives. The NCFS approved this agreement and provided said services totaling \$480.00.

WHEREAS, pursuant to said agreement, Mr. and Mrs. Vader was required to pay NCFS the sum of Four Hundred Eighty Dollars (\$480.00) immediately upon receipt of the invoice.

WHEREAS, on March 1, 2017, NCFS sent Mr. and Mrs. Vader an invoice in the sum of \$528.00, which included late fees and interest. On May 15, 2017 NCFS subsequently sent Mr. and Mrs. Vader a second invoice including additional late fees and interest in the sum of \$532.93. On October 4, 2017 the North Carolina Department of Justice sent Mr. and Mrs. Vader a third invoice in the sum of \$538.19. Mrs. Vader contacted Janine McLawhorn at the North Carolina Department of Agriculture on October 17, 2017, and stated that members of her family were ill and she had to be the primary caregiver for the ill family members. Mrs. Vader apologized for the unpaid invoices and stated that she and Mr. Vader wanted to pay \$100.00 by November 1, 2017, and the sum of \$50.00 on the first day of each month thereafter until the entire amount of \$538.19 is paid in full.

WHEREAS, the Department has requested that Mr. and Mrs. Vader pay the invoice totaling \$538.19 in full.

WHEREAS, the Department and Mr. and Mrs. Vader desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

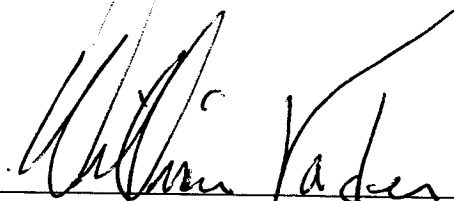
NOW, THEREFORE, IT IS RESOLVED THAT, in consideration of Mr. and Mrs. Vader's promise to pay to the Department the sum of \$538.19, by paying \$100.00 on or before November 1, 2017, eight equal monthly payments of \$50.00 per month on the first day of each month beginning December 1, 2017 and one final payment of \$38.19, according to the terms set forth below and the Department agrees to release Mr. and Mrs. Vader from any and all liability arising out of the dispute upon receipt of the final payment, and for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Mr. and Mrs. Vader shall pay the sum stated above by paying \$100.00 on or before November 1, 2017, eight equal payments of \$50.00 and one final payment of \$38.19. Each payment shall be due and payable on the 1st day of the month, **with the first payment of \$100.00 due on November 1, 2017. The final payment of \$38.19 shall be due on August 1, 2017.** The Department shall deem Mr. and Mrs. Vader's monthly payment as being received timely if Mr. and Mrs. Vader send their payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the 1st day of the month in which that payment is due, properly addressed to Janine McLawhorn, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. and Mrs. Vader agree to sign and have signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Mr. and Mrs. Vader comply with the terms of this Settlement Agreement, the Department shall forbear from bringing a civil action against Mr. and Mrs. Vader to collect the sum of money owed under the above-mentioned agreement, and shall forbear from filing the Confession of Judgment Mr. and Mrs. Vader has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, attached as Appendix I, only if Mr. and Mrs. Vader fail to make a monthly payment on time, after giving Mr. and Mrs. Vader notice by telephone call and e-mail message of their failure to make said payment, and after allowing Mr. and Mrs. Vader three business days to cure their breach by paying the amount due in full.
4. The Department further agrees that, once Mr. and Mrs. Vader has paid his final monthly payment and the Department has received the \$538.19 in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. and Mrs. Vader a document confirming receipt of payment and releasing Mr. and Mrs. Vader from further liability on this agreement and account. Further, the Department shall provide Mr. and Mrs. Vader

with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. and Mrs. Vader's breach of this Settlement Agreement.

5. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
6. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations, and agreements are merged into this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
7. The parties attest that this Settlement Agreement was voluntarily made after ample opportunity to review the document with any individuals, advisors, and counsel so desired.
8. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:




William Vader DATE 11/3/17

1494 Anderson Branch Road
Marshall, NC 28753



Claudia Vader DATE 11/3/17

1494 Anderson Branch Road
Marshall, NC 28753



Janine S. McLawhorn DATE 10/23/2017
Office of the General Counsel
North Carolina Department of Agriculture and
Consumer Services

A G R E E M E N T

This agreement (the "Agreement") is made and entered into effective as of this 21 day of January 2016 by and between the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section (hereinafter referred to as the "Department of Agriculture"), and Columbus County Animal Control (hereinafter referred to as the "Petitioner" or "Columbus County").

R E C I T A L S

WHEREAS, on June 18, 2015, the Department of Agriculture issued a Notice of Violations and an Assessment of Civil Penalty to Columbus County, a true and correct copy of which is annexed to this Agreement as Exhibit A; and

WHEREAS, in its Notice of Violations, the Department of Agriculture found that:

1. on May 19, 2015, two female pit bull dogs were impounded at the animal shelter operated by Columbus County;
2. the shelter's impound records indicated that these two dogs had been surrendered by their owners;
3. the dogs' owner did not provide any proof of ownership to the shelter at the time of the dogs' impoundment;
4. the shelter's impound records indicate that the dogs were to be held by the shelter until 2:00 p.m. on May 22, 2015 in order to comply with the 72-hour minimum holding period;
5. the shelter's impound records indicated that one of these two pit bull dogs was euthanized on May 21, 2015;
6. the paperwork for the euthanized pit bull dog did not document that the euthanized pit bull dog had a serious illness or injury that would have justified the dog's euthanization prior to the expiration of the 72-hour minimum period;
7. the shelter's impound records indicated that the other pit bull dog was not euthanized and was released to its owner on May 21, 2015; and

WHEREAS, based on its findings, the Department of Agriculture alleged that Columbus County, either by act or omission, violated N.C. Gen. Stat. § 19A-32.1(a),(b)(I) and (b)(i); and

WHEREAS, based on its findings contained in the June 18, 2015 Notice of Violations, the Department of Agriculture assessed a civil penalty against Columbus County in the amount of \$5,000.00; and

WHEREAS, Columbus County disputes the Department of Agriculture's findings and allegations that Columbus County violated any statute or that it engaged in any improper conduct whatsoever; and

WHEREAS, pursuant to a Consent Agreement entered into on December 13, 2013, between Columbus County and the Department of Agriculture, the parties agreed that Columbus County Animal Control would "prepare and submit a written Standard Operating Procedure ("SOP") covering the intake and disposition of animals. The SOP shall be consistent with and reflect the requirements of the North Carolina Animal Welfare Act, N.C. Gen. Stat. §§ 19A-1 et. seq. . . ."; and

WHEREAS, in compliance with this Consent Agreement, Columbus County Animal Control prepared a written Standard Operating Procedure, doing so with the assistance and input of an official from the Department of Agriculture; and

WHEREAS, those Standard Operating Procedure provided, in pertinent part, as follows:

4. Aggressive Animals: When an animal is judged to be extremely aggressive and presents a significant danger to Animal Control Staff when feeding or cleaning, the Animal Control Shelter Manager may authorize euthanasia at an earlier time than would otherwise be dictated; and

WHEREAS, on January 13, 2014, the Columbus County Attorney submitted the Standard Operating Procedure to the Department of Agriculture for review and approval; and

WHEREAS, the Department of Agriculture did not express any objections to Columbus County regarding the Standard Operating Procedure. Consequently, Columbus County reasonably believed that the lack of comment or objection by the Department of Agriculture regarding the Standard Operating Procedure operated as an approval of and endorsement of these procedures. Consequently, Columbus County Animal Control operated pursuant to this Standard Operating Procedure under the reasonable belief that it was approved by the Department of Agriculture, and was otherwise in full compliance with State law, regulation and policy; and

WHEREAS, Columbus County contends that the following events took place with respect to the two female pit bull dogs in question:

1. On May 19, 2015, the dogs' owner called Columbus County Animal Control and requested that a Columbus County Animal Control Officer come and pick up the dogs, stating that the dogs were aggressive and vicious and that her family no longer wanted them.

2. A Columbus County Animal Control Officer immediately responded to the call and picked up the dogs from their owners' residence, doing so in the presence of and with the assistance of the owner. The owner personally placed the dogs in the Animal Control Officer's truck out of concern that the dogs might attack the officer. The Animal Control Officer personally observed the dogs in question to be exceedingly vicious and aggressive.
3. The dogs continued to exhibit vicious and aggressive behavior at the Columbus County Animal Shelter during the following two days. Prisoners working at the facility experienced great difficulty in feeding the animals due to their aggressive temperament and were nearly bitten on several occasions.
4. After two days of continuous and unprovoked vicious behavior, the Columbus County Animal Control Director determined that both dogs exhibited an extremely aggressive temperament such that they presented a serious threat to the safety of the staff of the Columbus County Animal Shelter and that they were otherwise unadoptable.
5. Consequently, the Columbus County Animal Control Director made the considered decision to euthanize the dogs based upon their extremely aggressive temperament. This decision was made in accordance with Paragraph 4 of the Standard Operating Procedures for Columbus County Animal Control, which as noted above, provides that "When an animal is judged to be extremely aggressive and presents a significant danger to Animal Control Staff when feeding or cleaning, the Animal Control Shelter Manager may authorize euthanasia at an earlier time than would otherwise be dictated." One of the dogs was humanely euthanized using authorized procedures on the morning of May 21, 2015. The dogs' owner returned to the Columbus County Animal Control Shelter and retrieved the other dog before it was euthanized; and

WHEREAS, Columbus County denies any wrongdoing or improper conduct and submits that it and its personnel acted at all times in good faith and in the reasonable belief that they were following procedures approved by the Department of Agriculture and otherwise in compliance with State law and regulations; and

WHEREAS, on August 10, 2015, Columbus County filed a Petition for a Contested Case Hearing against the Department of Agriculture in the North Carolina Office of Administrative Hearings (hereinafter referred to as the "OAH") in that contested case entitled *Columbus County Animal Control v. The North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section*, No. 15 DAG 05828 (hereinafter referred to as the "OAH Case"); and

WHEREAS, in summary, Columbus County alleged in its OAH Petition for a Contested Case Hearing, *inter alia*, that the Department of Agriculture had acted improperly and/or without lawful authorization in issuing to Columbus County the June 18, 2015 Notice of Violations and in assessing a civil penalty against Columbus County in the amount of \$5,000.00; and

WHEREAS, in its Prehearing Statement filed in the OAH Case, the Department of Agriculture denied the allegations made by Columbus County in its Petition for a Contested Case Hearing in the OAH Case; and

WHEREAS, subsequent to Columbus County's filing of its Petition for a Contested Case Hearing in the OAH Case, the parties entered into settlement negotiations and discussions and agreed in principal to settle their disputes on the following terms: (i) officials of the Department of Agriculture would meet with officials and representatives of Columbus County and all such officials and representatives would come to an agreement on what they collectively concluded are appropriate written policies and standard operating procedures for the Columbus County Animal Shelter; (ii) once officials and representatives of the Department of Agriculture and Columbus County reached an agreement on what they collectively concluded are appropriate written policies and standard operating procedures for the Columbus County Animal Shelter, Columbus County would memorialize those policies and procedures and include them in Columbus County's policy manual; (iii) once the matters summarized in sub-paragraphs (i) and (ii) were accomplished, the Department of Agriculture would formally waive the \$5,000.00 civil penalty it assessed against Columbus County on June 18, 2015; and (iv) once the matters summarized in sub-paragraphs (i), (ii) and (iii) were accomplished, Columbus County would file a Notice of Dismissal With Prejudice of its Petition for a Contested Case Hearing in the OAH Case; and

WHEREAS, all of the actions referred to in sub-paragraphs (i) and (ii) above have now been accomplished; and

WHEREAS, the Department of Agriculture and Columbus County continue to desire to fully and finally compromise and settle the OAH Case and all other disputes and controversies between them involving or arising out of the matters embraced by Columbus County's Petition for a Contested Case Hearing in the OAH Case; and

WHEREAS, the Department of Agriculture and Columbus County desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of further litigation.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations

created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, the Department of Agriculture and Columbus County agree as follows:

1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by this reference as if fully set forth herein.

2. By its signature below, the Department of Agriculture hereby formally waives the \$5,000.00 civil penalty it assessed against Columbus County on June 18, 2015.

3. Within five (5) business days following the full and complete execution of this Agreement, Columbus County shall file a Dismissal with Prejudice of the OAH Case and shall serve a file-stamped copy of said Dismissal on counsel for the Department of Agriculture in the OAH Case.

4. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

5. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referred to in this Agreement.

6. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

7. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

8. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor of or against any party based upon which party drafted or participated in drafting this Agreement.

9. The parties agree and acknowledge that neither side admits to any wrongdoing or improper conduct, and that this Agreement and the parties' entrance therein shall not constitute any indicia, evidence or determination that any party engaged in any wrongdoing or improper conduct. Moreover, the parties agree and acknowledge that the June 18, 2015 Notice of Violations, Assessment of Civil Penalty and the purported findings therein shall not have any effect -- preclusive, precedential, collateral estoppel, evidentiary, or otherwise -- in any other forum, proceeding or dispute.

10. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and signed as of the day and year indicated by their signatures below:


THE NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
VETERINARY DIVISION, ANIMAL WELFARE
SECTION

By: 
Patricia Norris

Director, Animal Welfare Section, North Carolina
Department of Agriculture and Consumer Services

Date: 1/21/2016

COLUMBUS COUNTY ANIMAL CONTROL

By: 
WILLIAM E. CLARK
Columbus County Manager

Date: 1/15/16

Exhibit A

November 18, 2015 Notice of Violations
and Assessment of Civil Penalty



Steven W. Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Veterinary Division

R. Douglas Meckes, DVM
State Veterinarian

June 18, 2015

Columbus County Animal Control
Attn: Rossie Hayes
Shelter Manager
288 Legion Drive
Whiteville, NC 28472

UPS Tracking Number Signature Required
1Z 210 617 42 560 7 5238

NOTICE OF CIVIL PENALTY

RE: CIVIL PENALTY ASSESSMENT FOR VIOLATIONS OF NORTH CAROLINA GENERAL STATUTES §§ 19A-32.1 (a) and (b) (1)

Dear Mr. Hayes:

Pursuant to N.C. Gen. Stat. § 19A-40 I am issuing this notice to you that Columbus County Animal Control is assessed a civil penalty of \$5,000.00, as provided in the enclosed Notice of Violations and Order.

With regard to the civil penalty, within 60 days from the date of receipt, you must do one of the following:

1. Pay the civil penalty assessment; or
2. File a written petition for a contested case hearing in the NCOAH to appeal the penalty assessment.

Pursuant to N.C. Gen. Stat. § 150B-22, either party to a dispute may initiate informal settlement negotiations at any time. To negotiate a settlement of this assessment, present your offer to me. I may be contacted by telephone at (919) 715-7111. Settlement offers do not extend the 60-day deadline for payment or filing of a contested case petition.

Additional information about your options is provided below:

PAYMENT

To pay the penalty, please send your payment by check or money order made payable to the North Carolina Department of Agriculture and Consumer Services to:

North Carolina Department of Agriculture and Consumer Services
Dr. Patricia Norris
Director, Animal Welfare Section
1030 Mail Service Center
Raleigh, NC 27699-1030

APPEAL

If you file a contested case petition, it must be in writing and in the form prescribed by N.C. Gen. Stat. § 150B-23. The petition must be accompanied by a filing fee of twenty dollars (\$20.00) payable to the N.C. Office of Administrative Hearings. Should you have any questions about what the fee would be for your case, please contact the OAH Clerk's Office at 919-431-3000. Payment can be made by cash, money order, certified check or check drawn on an attorney's trust account. Make checks payable to: Office of Administrative Hearings. File the petition and one copy with:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714

Any questions about filing a petition may be directed to the Clerk of OAH by telephone 919/733-0926. You must serve NCDA&CS by mailing a copy of the petition to:

Ms. Tina Hlabse
North Carolina Department of Agriculture and Consumer Services
Registered Agent and General Counsel
1001 Mail Service Center
Raleigh, NC 27699-1001

Payment of the penalty will not foreclose further enforcement action against you for any new violation. If the violations which resulted in the assessment are of a continuing nature, NCDA&CS reserves the right to assess additional civil penalties in the future or take other enforcement action against you.

Your attention to this matter is appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read 'Patricia Norris', with a long horizontal flourish extending to the right.

Patricia Norris, DVM
Director, Animal Welfare Section

Attachment: Assessment Document

cc: R. Douglas Meckes, DVM, North Carolina State Veterinarian
Mr. Barry Bloch, Assistant Attorney General, N.C. Department of Justice
Ms. Tina Hlabse, General Counsel, NCDA&CS
Mr. Joe Reardon, Assistant Commissioner, NCDA&CS

STATE OF NORTH CAROLINA
COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
VETERINARY DIVISION

IN THE MATTER OF
COLUMBUS COUNTY ANIMAL
CONTROL

) NOTICE OF VIOLATIONS,
) ASSESSMENT OF CIVIL
) PENALTY
)
) For Violations Of:
) N. C. Gen. Stat. §§19A-32.1 (a) and (b) (1)

Acting pursuant to N.C. Gen. Stat. §19A-40, Dr. Patricia Norris, Director of the Animal Welfare Section ("AWS"), Veterinary Division, North Carolina Department of Agriculture and Consumer Services (NCDA&CS) makes the following:

I. FINDINGS OF FACT

1. At all times pertinent to this matter Columbus County Animal Control ("CCAC" or the "shelter") is an animal shelter registered pursuant to N.C. Gen. Stat. §19A-26.
2. On May 19, 2015 two female pit bull dogs were impounded at the shelter.
3. The impound sheets indicate that the dogs had been surrendered by the owner of the dogs. No proof of ownership was provided at the time of impoundment.
4. The impound sheets indicate that the dogs were to be held until 2 PM on May 22, 2015 to fulfill the 72 hours minimum holding period.
5. The impound sheet for the euthanized dog documents the euthanasia as occurring on May 21, 2015.
6. The paperwork for the euthanized dog does not document a serious illness or injury to justify the euthanasia prior to the 72 hour minimal holding period
7. The impound sheet for the released dog documents the owner reclaim as occurring on May 21, 2015.

As a result of this investigation, the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section, alleges that CCAC, either by act or omission, violated the following provisions of the N. C. General Statute 19A-32.1 (a), (b) (1) and (i). (See Appendix for text of cited General Statutes)

II. CORRECTIVE ACTIONS REQUIRED

CCAC shall develop written policies and procedures that detail the decision parameters for the euthanasia of animals as well as the required documentation. These policies and procedures must be in compliance with the N. C. Animal Welfare Act and the N. C. Administrative Code. These policies and procedures are to be provided to the AWS for review and approval within 7 days of receipt of this letter.

III. N. C. General Statute §19A-40. Civil Penalties.

The Director may assess a civil penalty of not more than five thousand dollars (\$5,000) against any person who violates a provision of this Article or any rule promulgated thereunder. In determining the amount of the penalty, the Director shall consider the degree and extent of harm caused by the violation. The clear proceeds of civil penalties assessed pursuant to this section shall be remitted to the Civil Penalty and Forfeiture Fund in accordance with G.S. 115C-457.2. (1995, c. 516, s.6; 1998-215, s.3.)

The Director notes that Columbus County Animal Control Shelter was assessed a civil penalty for \$6,500.00 on November 26, 2013. That civil penalty was assessed for violation of N. C. General Statute §19A-32.1.

IV. DECISION

As required by N.C. Gen. Stat. § 19A-40 in determining the amount of the civil penalty, I have considered the degree and extent of harm caused by the violations listed above.

Accordingly, CCAC is assessed a civil penalty of: \$5,000.00 for violating N. C. Gen. Stat. §§19A-32.1 (a) and (b) (1).

\$5,000.00 TOTAL AMOUNT ASSESSED

6/18/2015
Date

Patricia Norris
Dr. Patricia Norris
Director, Animal Welfare Section
North Carolina Department of
Agriculture & Consumer Services

Appendix

N. C. General Statutes §§19A-32.1 (a) and (b) (1)

§ 19A-32.1. Minimum holding period for animals in animal shelters; public viewing of animals in animal shelters; disposition of animals.

(a) Except as otherwise provided in this section, all animals received by an animal shelter or by an agent of an animal shelter shall be held for a minimum holding period of 72 hours, or for any longer minimum period established by a board of county commissioners, prior to being euthanized or otherwise disposed of.

(b) Before an animal may be euthanized or otherwise disposed of, it shall be made available for adoption under procedures that enable members of the public to inspect the animal, except in the following cases:

(1) The animal has been found by the operator of the shelter to be unadoptable due to injury or defects of health or temperament.

(2) The animal is seriously ill or injured, in which case the animal may be euthanized before the expiration of the minimum holding period if the manager of the animal shelter determines, in writing, that it is appropriate to do so. The writing shall include the reason for the determination.

STATE OF NORTH CAROLINA
COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION

16 CVS 6099

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, STANDARDS DIVISION,
proceeding by and through the
COMMISSIONER OF AGRICULTURE
OF THE STATE OF NORTH
CAROLINA,

Plaintiff,

v.

JAMES L. MCNAIR, III AND JOE B.
CLARK, III, Individually and d/b/a
PEOPLES GAS & OIL CO., INC. AND
PEOPLES GAS & OIL CO., INC., AN
UNINCORPORATED BUSINESS,

Defendants.

FILED
2016 NOV -9 A 11:04
MAKEDON
BY
CONSENT ORDER

THIS MATTER came before the undersigned upon the request of plaintiff North Carolina Department of Agriculture and Consumer Services, Standards Division, and defendant Joe B. Clark, III, d/b/a Peoples Gas & Oil Co., Inc.'s request for a Consent Order. It appearing that these parties have conferred and hereby agree to the following terms it is hereby ORDERED that:

1. Defendant Joe B. Clark, III, individually, and d/b/a "Peoples Gas & Oil Co., Inc.," and "Peoples Gas & Oil Co., Inc.," are hereby permanently Restrained and Prohibited from: marketing, selling, handling, storing, measuring, transporting, or distributing of LP-Gas and/or containers, equipment, or appliances which use of liquefied petroleum gas as defined in N.C. Gen. Stat. § 119-54.

a. Nothing in this Order shall be construed as prohibiting Defendant Joe B. Clark, III from repairing any LP-Gas containers, equipment, or appliances owned by himself or Peoples Gas and Oil Co., Inc. Furthermore, this Order shall not prohibit Defendant Joe B. Clark, III from handling, removing, transporting, or selling any LP-Gas tanks owned by himself or Peoples Gas & Oil Co., Inc. which are currently in the possession of former customers of Defendant Joe B. Clark, III or Peoples Gas & Oil Co. Inc. for the purpose of terminating his business as an LP-Gas Dealer. Nothing in this Order shall prevent Joe B. Clark, III or Peoples Gas from billing and/or collecting any money owed for sales or transactions done before Joe B. Clark and/or Peoples Gas ceased its business operations. Finally, this Order shall not prohibit Defendant Joe B. Clark, III from activities necessary to decommission the bulk tanks formerly operated by himself and Peoples Gas & Oil Co. Inc. as indicated in paragraph 3 below.

2. Within fifteen (15) days of this Order, Defendant Joe B. Clark, III shall notify each of Peoples Gas & Oil Co. Inc.'s former customers in writing that he has ceased operating as an LP-Gas Dealer and explain the customers' options with regards to obtaining a new provider and depositing of or removing any tanks or equipment owned by Defendant Joe B. Clark, III or Peoples Gas & Oil Co., Inc. in the customer's possession.

3. Within sixty (60) days from the date of this Order, Defendant Joe B. Clark, III shall either sell or properly decommission the 18,000-gallon LP-Gas tank located at 13855 Hwy 130 West, Maxton, Robeson County, North Carolina; and the 18,000-gallon LP-Gas tank and 30,000-gallon LP-Gas tank located at 91 Oak Street, Lumber Bridge, Robeson County, North Carolina, which were owned and/or operated by Defendant Joe B. Clark, III and Peoples Gas & Oil Co., Inc. Defendant Joe B. Clark, III shall notify plaintiff North Carolina Department of

Agriculture and Consumer Services in writing at least 48 hours after the sale or decommissioning of each tank is complete.

a. Defendant Joe B. Clark, III and Peoples Gas & Oil Co., Inc. may sell any LP-Gas remaining in these bulk tanks to another LP-Gas dealer that is licensed in North Carolina. Defendant Joe B. Clark, III shall notify plaintiff North Carolina Department of Agriculture and Consumer Services in writing at least 48 hours before any such sale and must include in the written notice: the purchasing LP-Gas Dealer, the date the LP-Gas will be physically transferred, and the method by which the LP-Gas shall be transferred.

b. These three bulk tanks shall be properly decommissioned in the following manner:

- i. If the tanks are to be scrapped, all propane vapor must be removed from the tank. This may be accomplished by the use of a compressor to reclaim as much of the vapor as desired, transferring custody of the resulting liquid as described in item 3(a) above, or the vapor may be burned off as prescribed in the *National Fire Protection Association LP-Gas Code*, sections 7.3.2.4 and 7.2.3.5.
- ii. If the tanks are to be sold as used propane tanks, then the propane vapor must be decreased to near atmospheric pressure, but some should remain to prevent entry of air into the tanks. If propane vapor at near atmospheric pressure is to be retained, then the openings shall be capped or plugged.
- iii. Piping connected to the bulk tanks shall be removed.

Consented and agreed to:

Stephen Benjamin
Stephen Benjamin, CPM
Director, Standards Division
North Carolina Department of Agriculture
and Consumer Services
Plaintiff

9/30/16
Date

Joe B. Clark, III
Joe B. Clark, III
Peoples Gas & Oil Co, Inc.
Defendant

9/28/2016
Date

SO ORDERED, this the 10th day of NOVEMBER 2016.

Donald A. Hyslop
SUPERIOR COURT JUDGE

FILED
2016 NOV 10 PM 6:07
WAKE CO., C.S.C.
BY

STATE OF NORTH CAROLINA

COUNTY OF BUNCOMBE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES MARKETING DIVISION
WESTERN NC FARMERS MARKET

IN THE MATTER OF DANIEL CORDOVA

SETTLEMENT AGREEMENT
RECITALS

This Settlement Agreement and Release is made and entered into the date reflected opposite the signature of Douglas F. Sutton, appearing below on page three, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter the "Department") and Daniel Cordova (hereinafter "Mr. Cordova").

WITNESSETH:

WHEREAS, on June 10, 2016, Mr. Cordova was involved in an accident that occurred at the North Carolina Western Farmers Market in Asheville, North Carolina. The Department sustained property damages in excess of Thirty Thousand Dollars (\$30,000.00) as a result of said accident. The Department has resolved its claim with Budget Rent a Car System, Inc. (Budget) and has received Twenty-Five Thousand Dollars and Zero Cents (\$25,000.00) from Budget. Pursuant to a release with Budget, the Department agreed to forever discharge all claims with Budget Rent A Car System, Inc. and all related "Budget entities, including but not limited to PC Holding, Aesop Leasing L.P. and Avis Budget Car Rental, LLC. Nothing in this Settlement and Release affects or changes the terms of that Release.

WHEREAS, Mr. Cordova agreed to pay to the Department the sum of Five Thousand Dollars (\$5,000.00) to resolve the Department's claim with him. Mr. Cordova agreed to pay twenty-four equal monthly payments of One Hundred Sixty-Six Dollars and Sixty-Six Cents (\$166.66) and a lump sum payment of One Thousand Dollars (\$1,000.00) Each payment was due and payable on the fifteenth of the month with the first payment being due and payable on November 15, 2016. Mr. Cordova failed to make the payments pursuant said agreement.

WHEREAS, Mr. Cordova paid the sum of Five Hundred Dollars (\$500.00) to Mr. Doug Sutton on March 31, 2017.

WHEREAS, the Department determined that Mr. Cordova breached the agreement by failing to make the required payments and currently owes an outstanding balance of \$4,500.00.

WHEREAS, the Department has requested that Mr. Cordova pay the remaining balance of the agreement, totaling \$4,500.00. The Department and Mr. Cordova desire to compromise and

settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

NOW, THEREFORE, IT IS RESOLVED THAT, in consideration of Mr. Cordova's promise to pay to the Department the sum of \$4,500.00, in nine initial equal monthly payments of \$500.00 according to the terms set forth below, and the Department hereby agrees to waive any interest, and release Mr. Cordova from any and all liability arising out of the dispute upon receipt of the final payment, and for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Mr. Cordova shall pay the sum stated above in nine initial equal payments of \$500.00. Each payment shall be due and payable on the 1st day of the month, **with the first payment of \$500.00 due on May 1, 2017. The final payment of \$500.00 shall be due on January 1, 2018.** The Department shall deem Mr. Cordova's monthly payment as being received timely if Mr. Cordova sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the 1st day of the month in which that payment is due, properly addressed to Douglas Sutton, NC Department of Agriculture, 570 Brevard Road, Asheville, NC 28806.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Cordova agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Mr. Cordova complies with the terms of this Settlement Agreement, the Department shall forbear from bringing a civil action against Mr. Cordova to collect the sum of money owed under the above-mentioned agreement, and shall forbear from filing the Confession of Judgment Mr. Cordova has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, attached as Appendix I, only if Mr. Cordova fails to make a monthly payment on time, after giving Mr. Cordova notice by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. Cordova three business days to cure his breach by paying the amount due in full.
4. The Department further agrees that, once Mr. Cordova has paid his final monthly payment and the Department has received the \$4,500.00 in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Cordova a document confirming receipt of payment and releasing Mr. Cordova from further liability on this agreement and account. Further, the Department shall provide Mr. Cordova with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Cordova's breach of this Settlement Agreement.
5. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.

- IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:

Chris McLennan 4/27/2017
 Christopher R. McLennan DATE
 Associate Attorney General
 North Carolina Department of Justice
 P. O. Box 629
 Raleigh, NC 27602-0629

STATE OF NORTH CAROLINA
COUNTY OF ROWAN

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, VETERINARY DIVISION

IN THE MATTER OF
MR. DAVID YANINAS &
ROWAN COUNTY ANIMAL SHELTER

)
) SETTLEMENT AGREEMENT
)
)
)
) For Violations Of:
) Animal Welfare Act
) N.C. General Statute §§ 19A-24 and
) 19A-32.1 &
) 2 N.C. Administrative Code 52J
) .0419, .0602 & .0609
)

RECITALS

Rowan County Animal Shelter ("RCAS"), Mr. David Yaninas ("Mr. Yaninas") and the North Carolina Department of Agriculture and Consumer Services (the "Department" or "NCAWS") desire to fully and finally settle this and all other disputes and controversies surrounding Mr. Yaninas' actions while serving as an animal control officer and certified euthanasia technician of RCAS, a registered animal shelter operated by Rowan County, North Carolina. Mr. Yaninas, RCAS and the Department desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

Whereas, the Department has found credible evidence of the following facts:

1. At all times pertinent to this matter Mr. Yaninas was employed by Rowan County as a certified euthanasia technician at the RCAS and RCAS was and is an animal shelter registered pursuant to N.C. Gen. Stat. § 19A-26.
2. On January 19, 2014, Mr. Yaninas was working as an animal control officer for Rowan County and responded to responded to stray dog call, intake no. 58345, on South Salisbury Avenue, Granite Quarry, NC, where he found male black and

white Pitbull mix dog severely injured by the road from an apparent automobile collision.

3. Mr. Yaninas submitted a written report of this event, stating that he found the dog at this location, and approached a woman who was standing behind the dog and who identified herself as the dog's owner. Mr. Yaninas recommended that she take the dog to the emergency veterinarian or allow him to take the dog to the animal shelter and humanely euthanize it. The woman verbally gave permission to him to remove the dog to RCAS and euthanize it. Mr. Yaninas did not ask the woman for proof of ownership or get her written consent to euthanize the dog before the end of the statutory 72 hour period.
4. Mr. Yaninas' report states that he gave the woman a "door hanger" and requested that she call RCAS with her information for the report.
5. Mr. Yaninas used a catch pole to lift the dog onto the truck. He stated he did so because the dog weighed approximately fifty pounds and it was necessary to do so to avoid personnel (sic) injury.
6. Mr. Yaninas' report states that he contacted RCAS Manager Staton, explained the dog's condition and received authorization to humanely euthanize the dog. The report does not reflect whether Mr. Yaninas informed Mr. Staton that he intended to use carbon monoxide to euthanize the dog.
7. Mr. Yaninas reported that he humanely euthanized the dog using the carbon monoxide chamber located at RCAS at 8:20 p.m. At that time he was the sole person present at RCAS.
8. Mr. Yaninas report states that euthanasia by lethal injection is "not allowed in the County Policy and Procedures for RCAC for injured animals."
9. Review of RCAS documents of this matter revealed that Mr. Yaninas had not secured written authorization from the dog's owner to permit RCAS to euthanize the dog less than 72 hours after RCAS received the dog.
10. Ms. Keisha Woodard submitted a written complaint to Rowan County Health Department stating, in part:
11. The dog was unable to move his back end, his right eye was hanging out of the socket and he had blood coming out of his mouth, but appeared calm;
12. Mr. Yaninas arrived and asked, "Are y' all the owners?" and "Do you want the dog or not?"

13. The dog's owner stated, "I don't think there is anything that can be done for him."
14. Mr. Yaninas then "took a pole with a loop and yanked that poor dog up off the asphalt and slung him into the cage! The dog was hollering, the lady started screaming and crying, her husband was trying to get her turned around to get her in the truck so she didn't have to witness anything further."
15. Mr. Yaninas "acted as if (he) was doing them a favor by not charging them to put the dog down."
16. On February 7, 2014, Mr. Yaninas submitted a written statement to RCAS Animal Control Supervisor Clai Martin recounting his report and reflecting that:
17. Based upon his observation of the dog, it was injured and not near death;
18. He euthanized the dog without a second person present because he could not stand to see the dog continuing to suffer anymore.
19. On January 9, 2014, RCAS manager Tommy Staton completed and signed a "Reason for Early Euthanasia Report" for animal no. 58345, stating that it was injured, "hit by car, eyeball hanging out could not use back legs."
20. On or about February 7, 2014, RC Animal Control Supervisor Martin issued Mr. Yaninas a written warning, ordered him to go through retraining and undertake sensitivity training.
21. Review of RCAS' euthanasia manual in use on January 19, 2014, revealed that it did include a copy of 02 NCAC Chapter 52J, section .0601 et seq.
22. Review of RCAS' euthanasia manual in use on January 19, 2014, revealed that it did not authorize the use of carbon monoxide to euthanize animals that are severely injured and/or near death.
23. The Department has been informed by counsel for Rowan County that Mr. Yaninas otherwise been an exemplary employee during his three years of employment.
24. As a result of this investigation, the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section, determined that RCAS, and Mr. Yaninas, either by act or omission, violated the following provisions of the N.C. General Statute:
 - a) N.C. Gen. Stat. § 19A-24
 - b) N.C. Gen. Stat. § 19A-32.1
 - c) North Carolina Administrative Code 52J .0419

- d) North Carolina Administrative Code 52J .0602
- e) North Carolina Administrative Code 52J .0609

1. On February 17, 2014, the Department issued an Order suspending Mr. Yaninas' certification of as a euthanasia technician and assessing him and RCAS civil penalties of \$1,000.00 each.
2. On or about March 6, Mr. Yaninas filed a Petition for Contested Case Hearing with the North Carolina Office of Administrative Hearings, assigned file number 14 DAG 01524, appealing the Department's assessment of a civil penalty against him and suspension of his certification as a euthanasia technician. Rowan County has no contested its civil penalty.

WHEREAS the parties desire to resolve this matter without further litigation.

NOW THEREFORE, the parties agree as follows:

1. Mr. Yaninas and RCAS agree that, upon signing this negotiated Settlement Agreement, they thereby waive their rights to appeal the Department's decision to suspend Mr. Yaninas' certification as a euthanasia technician and to impose civil penalties of one thousand dollars (\$1,000.00) upon each of them for the acts and omissions set forth above, to the North Carolina Office of Administrative Hearings and/or any court or tribunal having jurisdiction over them, the Department and the Department's exercise of its lawful authority. Further, Mr. Yaninas shall, within ten days of receiving notice that the Department has accepted this Settlement Agreement, sign and file with the North Carolina Office of Administrative Hearings a voluntary dismissal with prejudice pursuant to N.C. R.C.P. Rule 41(a) in the case captioned, "David M. Yaninas, Petitioner, v. North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Respondent," file no. 14 DAG 01524.
2. The Department shall stay imposition of six hundred dollars (\$600.00) of Mr. Yaninas' civil penalty of one thousand dollars (\$1,000.00). Mr. Yaninas shall pay the sum of

four hundred dollars (\$400.00) within thirty (30) days of receipt of notice of the Department's acceptance of this Settlement Agreement. The remainder of the civil penalty, six hundred dollars (\$600.00) shall remain stayed for a period of nine months according to the terms and conditions set forth in paragraphs three, four, five and six below. The Department hereby stays imposition of five hundred dollars of the one thousand dollar (\$1,000.00) civil penalty imposed upon RCAS from one thousand dollars to five hundred dollars (\$500.00). RCAS shall pay five hundred dollars (\$500.00) to the Department within thirty (30) days of receipt of notice of the Department's acceptance of this Settlement Agreement. The remainder of the civil penalty, five hundred dollars (\$500.00) shall remain stayed for a period of nine months according to the terms and conditions set forth in paragraphs three, four, five and six, below;

3. The parties agree that, if RCAS and Mr. Yaninas fully and faithfully satisfy the requirements of this Settlement Agreement and the Department finds no new violations of the North Carolina Animal Welfare Act or the rules promulgated thereunder for a period of nine months after this Settlement Agreement is signed by the Department's authorized representative, then the stayed portions of RCAS' and Mr. Yaninas' civil penalties shall be deemed cancelled;

4. The Department agrees to lift the suspension of Mr. Yaninas' euthanasia technician certification upon his satisfactory completion of the following requirements:

a) Mr. Yaninas shall inform the director of the Animal Welfare Section of his intention to complete the qualification course for certification as a euthanasia technician, stating the date, location, and name of instructor giving the course. The Department reserves the right to disapprove of the instructor and direct Mr. Yaninas to complete the course under the instruction of an instructor it approves;

b) Mr. Yaninas shall attend said certification course, successfully complete the written examination for certification and successfully complete the practical examination for the methods of euthanasia for which he wishes to be certified, except for CO, which the parties expressly agree will not be restored by the Department, within nine months from the date he receives notice that the Department has approved this Settlement Agreement. It is understood by the parties that if Mr. Yaninas fails either or both the written and practical examinations he attempts after attending the certification course, he may attempt the pass the examination(s) he failed without retaking the certification course or the examination he has already passed so long as he passes both examinations within the nine month period provided. If he fails to pass both examinations within said nine month period, he may only seek restoration of his euthanasia technician certification by submitting a new application;

c) Upon receipt of confirmation from the course instruction that Mr. Yaninas has attended the course and successfully passed the certification examinations, the Department shall lift its suspension of Mr. Yaninas' certification as a euthanasia technician except for his privileges to operate the CO chamber located on the grounds at RCAS. The privilege of operating said CO chamber shall remain in full force and effect for nine months running from the date the Department approves this agreement. Mr. Yaninas may serve as the second person present while another certified euthanasia technician or a veterinarian operates the CO chamber. Upon completion of said nine month period, Mr. Yaninas may apply for reinstatement of his privilege of operating the CO chamber on the grounds at RCAS;

5. If the Department receives information that RCAS or Mr. Yaninas, while acting in his capacity as a certified euthanasia technician at RCAS, has committed another violation of the North Carolina Animal Welfare Act or the rules promulgated thereunder, whether relating to animal euthanasia or any other aspect of the laws or rules applicable to animal shelters under the North Carolina Animal Welfare Act, or information that RCAS or Mr. Yaninas has otherwise failed to comply with this Settlement Agreement, the Department may, as a matter within its sound discretion, lift the stay of RCAS's remaining civil penalty and/or lift the stays and impose the remaining portions of both of their civil penalties, together or separately;

6. If Mr. Yaninas notifies the Department before the expiration of said nine month period to request additional time in which to attend said course, informing the Department of the circumstances that shall prevent him from doing so by his deadline, the Department shall inform Mr. Yaninas of the date and location of the next available approved CET training course to be held no farther than 200 miles from his place of residence and that his successful completion of said course is required for his continued compliance with this Settlement Agreement. If Mr. Yaninas fails to comply with said requirement or any other obligation established by this Settlement Agreement or any subsequent amendment to it, the Department may, as a matter within its sound discretion, lift the stay and reimpose his obligation to pay the remainder of his civil penalty of six hundred dollars (\$600.00);

7. The RCAS and Mr. Yaninas acknowledge that, upon acceptance and execution of this settlement agreement by the Department, the settlement agreement shall become a public record within the meaning of Chapter 132 of the North Carolina General Statutes and shall be subject to public inspection and dissemination pursuant to the provisions thereof;

8. The parties agree to act in good faith in the implementation of this agreement;

9. The parties may discuss this Settlement Agreement, provide any pertinent documents and the final executed written Settlement Agreement to the press and the public, in accordance with N.C. Gen. Stat. Chapter 132. Further, the parties agree to bear their own attorneys' fees and costs;

10. It is understood between the parties that this Settlement Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters. Terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto;

11. The effective date of this settlement agreement will be the date on which it has been executed by all parties as shown on the signature lines below;


12. North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates indicated below:



DAVID M. YANINAS, Individually

Date: 03/24/14



Gary Page, County Manager
As authorized agent for Rowan County Animal Shelter

Date: 3/24/14

FOR THE DEPARTMENT:



Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice
ATTORNEY FOR THE DEPARTMENT

Date: 3/31/2014



Dr. David T. Marshall, State Veterinarian
North Carolina Department of Agriculture & Consumers Services

Date: 3/31/14

17-02419

RELEASE FOR PROPERTY DAMAGE ONLY

I, Dean Nunnally for myself, my heirs, executors, administrators, successors, and assigns in consideration of the payment of \$1400.00. I do hereby remise, release, and forever discharge The North Carolina Department of Agriculture and Consumer Services, the North Carolina State Fairgrounds, and their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising out of an incident which occurred during the months of August 2017 to December 2017 in the N. C. State Fairgrounds administrative offices at 1025 Blue Ridge Road, Raleigh, North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows :

\$ 1400.00 To: Dean Nunnally

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/WE have signed this Release at 1:15 PM in the State of NORTH CAROLINA this 13TH day of DECEMBER, 2017.

IN THE PRESENCE OF

Gail Fuller Witness Name
5701 Country Forest Dr. Witness Address
Raleigh, NC 27606 City/State/Zip

DEAN E NUNNALLY Print Name
[Signature] Signature
5208 ROSWELL CREST CT Address
APEX, NC 27539 City/State/Zip
[Redacted] Social Security #

AGREED TO:

Agency: N.C. Department of Justice

By: [Signature]

INDUSTRIAL

DEC 11 2014

TA-24663

RELEASE FOR PROPERTY DAMAGE ONLY

I/WE BRADFORD D. DENT

For myself/ourselves, my/our heirs, executors, administrators, successors and assigns in consideration of the payment of \$ \$30,000.00, I/we do hereby remise, release and forever discharge The State of North Carolina, THE NORTH CAROLINA DEPT. OF AGRICULTURE, NC FOREST SERVICE, DON WATSON, JASON HAYES

and its, his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of DAMAGE TO

PROPERTY (including loss of use thereof) arising out of an accident which occurred on or about the 2ND day of MAY, 2014, at or near 670 HICKS ROAD CANDOR in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows:

\$ \$30,000 To: BRADFORD D. DENT

\$ _____ To: _____

IT IS UNDERSTOOD AND AGREED that neither this Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor this Release is given.

IN WITNESS WHEREOF I/we have signed this Release at Asheboro in the State of NC this 10th day of NOVEMBER 2014

IN THE PRESENCE OF

[Signature] witness
Wilson, NC address

BRAD DENT claimant
18309 PLEASANT RIDGE PL address
SS# Lutz, FL 33548
[Redacted] claimant
[Redacted] address

_____ witness
_____ address

S. S.# _____

AGREED TO:

Agency

By

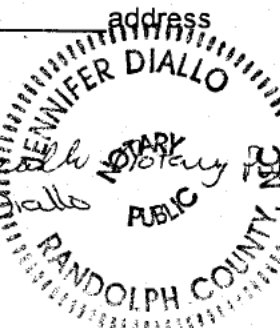
NC Dept of Justice
[Signature]

State of NC
County of Randolph

AG-D1(12-96)

Jennifer Diallo
Jennifer Diallo
NOTARY PUBLIC

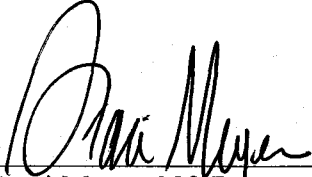
My commission expires July 31, 2017



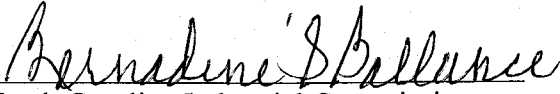
TA-24663

Form No. T-3

Approved by:


Staci Meyer, NC Department of Justice

Approved by:


North Carolina Industrial Commission

INDUSTRIAL
DEC 11 2014
COMMISSION

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NORTH CAROLINA
WESTERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

v.

NORTH GEORGIA ELECTRIC
MEMBERSHIP CORPORATION et al.,

Defendants.

Civil Action No. 5:16-cv-820

REMEDIAL DESIGN/REMEDIAL ACTION (RD/RA) CONSENT DECREE

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I. BACKGROUND

A. The United States of America (“United States” or “Plaintiff”), on behalf of the Administrator of the United States Environmental Protection Agency (“EPA”), filed a complaint in this matter pursuant to Sections 106 and 107 of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. §§ 9606 and 9607.

B. The United States in its complaint seeks, *inter alia*: (1) reimbursement of costs incurred by EPA and the Department of Justice (“DOJ”) for response actions at the Ward Transformer Superfund Site in Raleigh, North Carolina (“Site”), together with accrued interest; (2) performance of response actions by the defendants at the Site consistent with the National Contingency Plan, 40 C.F.R. Part 300 (“NCP”); and (3) assessment of civil penalties against defendant Carr & Duff, Inc., for its alleged failure to comply with an EPA unilateral administrative order to perform remedial work at the Site.

C. In accordance with the NCP and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), EPA notified the State of North Carolina (the “State”) on December 23, 2008, of negotiations with potentially responsible parties (“PRPs”) regarding the implementation of the remedial design and remedial action (“RD/RA”) for the Site, and EPA has provided the State with an opportunity to participate in such negotiations and be a party to this Consent Decree (“CD”).

D. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the Department of Interior and the National Oceanic Atmospheric Administration on December 23, 2008, of negotiations with PRPs regarding the release of hazardous substances that may have resulted in injury to the natural resources under federal trusteeship and has encouraged the trustees to participate in the negotiation of this CD.

E. The defendants that have entered into this CD (“Settling Defendants” or “SDs”) do not admit any liability to Plaintiff arising out of the transactions or occurrences alleged in the complaint, nor do they acknowledge that the release or threatened release of hazardous substances at or from the Site constitutes an imminent and substantial endangerment to the public health or welfare or the environment. Settling Federal Agencies (“SFAs”) do not admit any liability arising out of the transactions or occurrences alleged in any counterclaim asserted by SDs.

F. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List (“NPL”), set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on April 30, 2003, 68 Fed. Reg. 23,077.

G. In response to a release or a substantial threat of a release of a hazardous substances at or from the Site, in April 2003, EPA commenced a Remedial Investigation and Feasibility Study (“RI/FS”) for the Site pursuant to 40 C.F.R. § 300.430.

H. EPA completed a Revised Remedial Investigation and Risk Assessment Report in September 2004, and a Remedial Investigation Report for Operable Unit 1 (“OU1”), Groundwater and Downstream Reaches, in July 2007, and EPA completed a Feasibility Study Report for Operable Unit 1, Downstream Reaches, Final, in July 2007.

I. On September 16, 2005, EPA Region 4 signed an Administrative Settlement Agreement and Order on Consent (“Removal AOC”) with Consolidation Coal Company, individually and as successor to Bishop Coal Company and Itmann Coal Company (“Consol”), Duke Energy Progress, LLC (“Duke”), Bassett Furniture Industries, Inc. (“Bassett”), Ward Transformer Company, Inc., and Ward Transformer Sales and Service, Inc. to perform a time-critical removal action at the Ward Transformer facility and adjacent parcels (now known as Operable Unit 2 (“OU2”)). Consol, Duke, Bassett, and PCS Phosphate Company, Inc. (“PCS”) performed the removal action required by the Removal AOC.

J. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the Feasibility Study and of the Proposed Plan for remedial action on August 6, 2007, and August 8, 2007, in two major local newspapers of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Regional Administrator, EPA Region 4, based the selection of the response action.

K. The decision by EPA on the remedial action to be implemented at OU1 of the Site is embodied in a Record of Decision for OU1 (“OU1 ROD”), executed on September 29, 2008, on which the State has given its concurrence. The ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA, 42 U.S.C. § 9617(b).

L. On September 29, 2011, pursuant to Section 106(a) of CERCLA, EPA Region 4 issued a unilateral administrative order to 23 parties, ordering them to develop the remedial design and perform the remedial action for the remedy set forth in the OU1 ROD.

M. On January 9, 2014, EPA Region 4 signed an Administrative Settlement Agreement and Order on Consent (“OU2 RI/FS AOC”) with Consol, Duke, and PCS to perform, and with certain federal agencies, including the United States Department of the Army, United States Department of the Navy, United States Department of the Air Force, and Tennessee Valley Authority, to partially fund, a supplemental remedial investigation/focused feasibility study (“RI/FS”) on OU2. Consol, Duke, and PCS are performing the RI/FS for OU2. EPA anticipates publishing a Record of Decision for OU2 (“OU2 ROD”) after the completion of the Remedial Investigation and Feasibility Study. EPA will perform the remedy for OU2 set forth in the OU2 ROD.

N. Based on the information presently available to EPA, EPA believes that the Work will be properly and promptly conducted by the Performing Settling Defendants (“PSDs”) if conducted in accordance with this CD and its appendices and funded by the Sales-Only Cashout Settling Defendants, Cashout Settling Defendants, Settling Repair Defendants, and SFAs.

O. Solely for the purposes of Section 113(j) of CERCLA, 42 U.S.C. § 9613(j), the remedy set forth in the OU1 ROD and the Work to be performed by PSDs shall constitute a response action taken or ordered by the President for which judicial review shall be limited to the administrative record.

P. The Parties recognize, and the Court by entering this CD finds, that this CD has been negotiated by the Parties in good faith and the settlement memorialized in this CD will

expedite the cleanup of the Site and will avoid prolonged and complicated litigation between the Parties, and that this CD is fair, reasonable, and in the public interest.

NOW, THEREFORE, it is hereby Ordered, Adjudged, and Decreed:

II. JURISDICTION

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1345, and 42 U.S.C. §§ 9606, 9607, and 9613(b). This Court also has personal jurisdiction over SDs. Solely for the purposes of this CD and the underlying complaint, SDs waive all objections and defenses that they may have to jurisdiction of the Court or to venue in this District. SDs shall not challenge the terms of this CD or this Court's jurisdiction to enter and enforce this CD.

III. PARTIES BOUND

2. This CD is binding upon the United States and upon SDs and their successors and assigns. Any change in ownership or corporate or other legal status of an SD including, but not limited to, any transfer of assets or real or personal property, shall in no way alter such SD's responsibilities under this CD.

3. PSDs shall provide a copy of this CD to each contractor hired to perform the Work and to each person representing any PSD with respect to the Site or the Work, and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this CD. PSDs or their contractors shall provide written notice of the CD to all subcontractors hired to perform any portion of the Work. PSDs shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Work in accordance with the terms of this CD. With regard to the activities undertaken pursuant to this CD, each contractor and subcontractor shall be deemed to be in a contractual relationship with PSDs within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

IV. DEFINITIONS

4. Unless otherwise expressly provided in this CD, terms used in this CD that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this CD or its appendices, the following definitions shall apply solely for purposes of this CD:

“Affected Property” shall mean all real property at the Site and any other real property where EPA determines, at any time, that access, land, water, or other resource use restrictions, and/or Institutional Controls are needed to implement the Remedial Action.

“Bassett” shall mean Non-Funding Performing Settling Defendant Bassett Furniture Industries, Inc.

“Cashout Settling Defendants” shall mean those Settling Defendants identified in Appendix B.

“Cashout Settling Federal Agencies” shall mean the United States Department of the Army (“Army”), United States Department of the Navy (“Navy”), and United States Department of the Air Force (“Air Force”) and their successor departments, agencies, or instrumentalities.

“CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675.

“Consol” shall mean Non-Funding Performing Settling Defendant Consolidation Coal Company, individually and as successor to Bishop Coal Company and Itmann Coal Company.

“Consent Decree” or “CD” shall mean this consent decree and all appendices attached hereto (listed in Section XXIII). In the event of conflict between this CD and any appendix, this CD shall control.

“Day” or “day” shall mean a calendar day. In computing any period of time under this CD, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.

“DOJ” shall mean the United States Department of Justice and its successor departments, agencies, or instrumentalities.

“Duke” shall mean Cashout Settling Defendant Duke Energy Progress, LLC.

“Effective Date” shall mean the date upon which the approval of this CD is entered on the Court’s docket.

“EPA” shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

“EPA Hazardous Substance Superfund” shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

“Escrow Agent” shall mean Thomas Claassen, Schneider Downs & Co., Inc., One PPG Place Suite 1700, Pittsburgh, PA 15222.

“Financial Trustee” shall mean Schneider Downs & Co., Inc., One PPG Place Suite 1700, Pittsburgh, PA 15222.

“Future Response Costs” shall mean all costs, including both direct and indirect costs, that the United States incurs pursuant to ¶ 11 (Emergencies and Releases), ¶ 29 (Access to Financial Assurance), Section VIII (Property Requirements) (including the cost of attorney time and any monies paid to secure or enforce access or land, water, or other resource use restrictions and/or to secure, implement, monitor, maintain, or enforce Institutional Controls including the amount of just compensation), and Section XIV (Dispute Resolution), and all litigation costs. Future Response Costs shall also mean all costs, including both direct and indirect costs, that the United States incurs in enforcing this CD.

“Institutional Controls” or “ICs” shall mean Proprietary Controls and state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices that: (a) limit land, water, or other resource use to minimize the potential for human exposure to Waste Material at or in connection with the Site; (b) limit land, water, or other resource use to

implement, ensure non-interference with, or ensure the protectiveness of the RA; and/or (c) provide information intended to modify or guide human behavior at or in connection with the Site.

“Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at http://www.epa.gov/ocfopage/finstatement/superfund/int_rate.htm.

“Interest Earned” shall mean interest earned on amounts in the Ward Transformer Disbursement Special Account, which shall be computed monthly at a rate based on the annual return on investments of the EPA Hazardous Substance Superfund. The applicable rate of interest shall be the rate in effect at the time the interest accrues.

“National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

“Non-Funding Performing Settling Defendants” shall mean Settling Defendants Consol, PCS, and Bassett.

“Non-Settling Owner” shall mean any person, other than an SD, that owns or controls any Affected Property. The clause “Non-Settling Owner’s Affected Property” means Affected Property owned or controlled by Non-Settling Owner.

“Operation and Maintenance” or “O&M” shall mean all activities required to operate, maintain, and monitor the effectiveness of the RA as specified in the SOW or any EPA-approved O&M Plan.

“OU1 ROD” shall mean the EPA Record of Decision relating to Operable Unit 1 at the Site signed on September 29, 2008, by the Regional Administrator, EPA Region 4, or his/her delegate, and all attachments thereto. The OU1 ROD is attached as Appendix F.

“OU2 RI/FS AOC” shall mean the Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation and Focused Feasibility Study entered on January 9, 2014, between EPA Region 4 and Consol, Duke, PCS, SFAs, and five other federal agencies.

“OU2 RI/FS AOC Parties” shall mean Consol, Duke, PCS, and SFAs.

“Paragraph” or “¶” shall mean a portion of this CD identified by an Arabic numeral or an upper or lower case letter.

“Parties” shall mean the United States and SDs.

“PCS” shall mean Non-Funding Performing Settling Defendant PCS Phosphate Company, Inc.

“Performance Standards” shall mean the cleanup levels and other measures of achievement of the remedial action objectives, as set forth in the OU1 ROD.

“Performing Settling Defendants” or “PSDs” shall mean the Settling Repair Defendants and Non-Funding Performing Settling Defendants.

“Plaintiff” shall mean the United States.

“Proprietary Controls” shall mean easements or covenants running with the land that (a) limit land, water, or other resource use and/or provide access rights and (b) are created pursuant to common law or statutory law by an instrument that is recorded in the appropriate land records office.

“RCRA” shall mean the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992 (also known as the Resource Conservation and Recovery Act).

“Remedial Action” or “RA” shall mean the remedial action selected in the OU1 ROD.

“Remedial Design” or “RD” shall mean those activities to be undertaken by PSDs to develop final plans and specifications for the RA as stated in the SOW.

“Sales-Only Cashout Settling Defendants” shall mean those Settling Defendants identified in Appendix A.

“Sales-Only Cashout Settling Federal Agency” shall mean the Tennessee Valley Authority and its successor departments, agencies, or instrumentalities.

“Section” shall mean a portion of this CD identified by a Roman numeral.

“Settling Defendants” or “SDs” shall mean the Sales-Only Cashout Settling Defendants, Cashout Settling Defendants, and PSDs.

“Settling Federal Agencies” or “SFAs” shall mean the Cashout Settling Federal Agencies, which consist of the Army, Navy, and Air Force, and the Sales-Only Cashout Settling Federal Agency, the Tennessee Valley Authority.

“Settling Repair Defendants” shall mean those Settling Defendants identified in Appendix C.

“Site” shall mean the Ward Transformer Superfund Site located in Raleigh, Wake County, North Carolina. The Site includes the Ward Transformer facility, certain parcels adjacent to the facility, nearby drainage pathways, and areas downgradient from the Ward Transformer facility as described in the OU1 ROD, and encompasses the areal extent of the contamination therefrom in the surface and subsurface sediments, soils, and waters. The Site is generally depicted on the map attached as Appendix E.

“State” shall mean the State of North Carolina.

“Statement of Work” or “SOW” shall mean the document describing the activities PSDs must perform to implement the RD, the RA, and O&M regarding the Site, which is attached as Appendix G.

“Supervising Contractor” shall mean the principal contractor retained by PSDs to supervise and direct the implementation of the Work under this CD.

“Transfer” shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

“Trust” shall mean the Ward Superfund OU1 Trust Fund to be established by the PSDs to receive settlement and other payments regarding the Site from the Settling Repair Defendants, the Cashout Settling Defendants, the Sales-Only Cashout Settling Defendants, the SFAs, and the Ward Transformer Disbursement Special Account, or such successor trust account as may be established by the PSDs.

“UAO” shall mean the Unilateral Administrative Order for OU1 issued by EPA on September 29, 2011.

“UAO Parties” shall mean those Settling Defendants identified in Appendix D.

“United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA and the SFAs.

“Ward Transformer Disbursement Special Account” shall mean the special account, within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3), and ¶ 36 (Creation of Ward Transformer Disbursement Special Account and Agreement to Disburse Funds to PSDs).

“Ward Transformer Special Account” shall mean the special account, within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3).

“Waste Material” shall mean (1) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any “hazardous material” under Section 130A-310(2) of the North Carolina General Statutes.

“Work” shall mean all activities and obligations SDs are required to perform under this CD, except the activities required under Section XX (Retention of Records). For purposes of clarity, Work includes, but is not limited to, all activities, including payment and funding obligations, required by the CD, including payment of Future Response Costs, financial assurance, stipulated penalties, and performance of further response actions pursuant to ¶ 18.

V. GENERAL PROVISIONS

5. **Objectives of the Parties.** The objectives of the Parties in entering into this CD are to protect public health or welfare or the environment by the financing of response actions at the Site by the Sales-Only Cashout Settling Defendants, Cashout Settling Defendants, Settling Repair Defendants, and SFAs, and the design and implementation of response actions at the Site by the PSDs; and to resolve the claims of Plaintiff against the SDs and the claims of the SDs that have been or could have been asserted against the United States with regard to this Site as provided in this CD.

6. Commitments by SDs and SFAs.

a. The Settling Repair Defendants, Cashout Settling Defendants, Sales-Only Cashout Settling Defendants, and SFAs shall finance the Work pursuant to this CD, and the PSDs shall perform the Work in accordance with this CD and all deliverables developed by PSDs and approved or modified by EPA pursuant to this CD. The PSDs shall also have access to funds from the Ward Transformer Disbursement Special Account as set forth in Section XI of this CD.

b. The Settling Repair Defendants shall make the initial payments to the Trust as provided in ¶ 32.a(1) of this CD. The Settling Repair Defendants shall pay any future assessments required to complete the Work pursuant to ¶ 32.b of this CD and the allocation schedule in Appendix C. In the event that any Settling Repair Defendant becomes insolvent, is in bankruptcy, or is otherwise unable or unwilling to pay all or some portion of its share of any future assessment, the remaining Settling Repair Defendants shall pay any such unpaid amount proportionally based on their allocations for future contributions set forth in Appendix C.

c. Upon making the payments to the Trust required under ¶ 32.a(1) of this CD and as set forth in Appendix A, each Sales-Only Cashout Settling Defendant shall have no further obligations under this CD, subject to the reservations set forth in ¶ 77.a. The payment obligations of Sales-Only Cashout Settling Defendants are several.

d. Upon making the payments to the Trust required under ¶ 32.a(1) of this CD and as set forth in Appendix B, which payment obligations are several, each Cashout Settling Defendant shall have no further obligations under this CD, subject to the reopeners set forth in ¶¶ 74 and 75 and the reservations set forth in ¶ 77.a.

e. Upon making the payments to the Trust required under ¶ 32.a(3) of this CD, the Sales-Only Cashout Settling Federal Agency shall have no further obligations under this CD, subject to the reservations set forth in ¶ 77.a.

f. Upon making the payments to the Trust required under ¶ 32.a(4) of this CD, each Cashout Settling Federal Agency shall have no further obligations under this CD, subject to the reopeners set forth in ¶¶ 74 and 75 and the reservations set forth in ¶ 77.a.

g. The PSDs will use the funds paid by the Sales-Only Cashout Settling Defendants, the Cashout Settling Defendants, the Settling Repair Defendants, and the SFAs, and the funds committed to the Work by EPA under Section XI of this CD, to finance the performance of the Work.

h. The obligations of the PSDs to finance and perform the Work and to pay Future Response Costs due under this CD are joint and several. In the event of the insolvency of any PSD or the failure by any PSD to implement any requirement of this CD, the remaining PSDs shall complete all such requirements.

i. Notwithstanding any other provision of this CD, in the event of any action by the United States to enforce this CD, no enforcement action shall be taken, and no stipulated penalties assessed, against any Non-Funding Performing Settling Defendant unless and until the United States has exhausted the pursuit of its remedies against all other PSDs.

7. **Compliance with Applicable Law.** Nothing in this CD limits PSDs' obligations to comply with the requirements of all applicable federal and state laws and regulations. PSDs must also comply with all applicable or relevant and appropriate requirements of all federal and state environmental laws as set forth in the OU1 ROD and the SOW. The activities conducted pursuant to this CD, if approved by EPA, shall be deemed to be consistent with the NCP as provided in Section 300.700(c)(3)(ii) of the NCP.

8. **Permits.**

a. As provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and Section 300.400(e) of the NCP, no permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work). Where any portion of the Work that is not on-site requires a federal or state permit or approval, PSDs shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals.

b. PSDs may seek relief under the provisions of Section XIII (Force Majeure) for any delay in the performance of the Work resulting from a failure to obtain, or a delay in obtaining, any permit or approval referenced in ¶ 8.a and required for the Work, provided that they have submitted timely and complete applications and taken all other actions necessary to obtain all such permits or approvals.

c. This CD is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

VI. PERFORMANCE OF THE WORK

9. **Coordination and Supervision.**

a. **Project Coordinators.**

(1) PSDs' Project Coordinator must have sufficient technical expertise to coordinate the Work. PSDs' Project Coordinator may not be an attorney representing any PSD in this matter and may not act as the Supervising Contractor. PSDs' Project Coordinator may assign other representatives, including other contractors, to assist in coordinating the Work.

(2) EPA shall designate and notify the PSDs of EPA's Project Coordinator and Alternate Project Coordinator. EPA may designate other representatives, which may include its employees, contractors and/or consultants, to oversee the Work. EPA's Project Coordinator/Alternate Project Coordinator will have the same authority as a remedial project manager and/or an on-scene coordinator, as described in the NCP. This includes the authority to halt the Work and/or to conduct or direct any necessary response action when he or she determines that conditions at the Site constitute an emergency or may present an immediate threat to public health or welfare or the environment due to a release or threatened release of Waste Material.

(3) PSDs' Project Coordinator shall meet with EPA's Project Coordinator at least monthly, in person or by phone.

b. **Supervising Contractor.** PSDs' proposed Supervising Contractor must have sufficient technical expertise to supervise the Work and a quality assurance system that complies with ANSI/ASQC E4-2004, Quality Systems for Environmental Data and Technology Programs: Requirements with Guidance for Use (American National Standard).

c. **Procedures for Disapproval/Notice to Proceed.**

(1) PSDs shall designate, and notify EPA, within 10 days after the Effective Date, of the name(s), contact information, and qualifications of the PSDs' proposed Project Coordinator and Supervising Contractor.

(2) EPA, after a reasonable opportunity for review and comment by the State, shall issue notices of disapproval and/or authorizations to proceed regarding the proposed Project Coordinator and Supervising Contractor, as applicable. Any notice of disapproval shall include an explanation of the basis for such disapproval. If EPA issues a notice of disapproval, PSDs shall, within 30 days, submit to EPA a list of supplemental proposed Project Coordinators and/or Supervising Contractors, as applicable, including a description of the qualifications of each. EPA shall issue a notice of disapproval or authorization to proceed regarding each supplemental proposed coordinator and/or contractor. PSDs may select any coordinator/contractor covered by an authorization to proceed and shall, within 21 days, notify EPA of PSDs' selection.

(3) PSDs may change their Project Coordinator and/or Supervising Contractor, as applicable, by following the procedures of ¶¶ 9.c(1) and 9.c(2).

10. **Performance of Work in Accordance with SOW.** PSDs shall: (a) develop the RD; (b) perform the RA; and (c) operate, maintain, and monitor the effectiveness of the RA; all in accordance with the SOW and all EPA-approved, conditionally-approved, or modified deliverables as required by the SOW. All deliverables required to be submitted for approval under the CD or SOW shall be subject to approval by EPA in accordance with Section V (Planning and Deliverables) of the SOW.

11. **Emergencies and Releases.** PSDs shall comply with the emergency and release response and reporting requirements under Section V, Task II, ¶ A.6 (Emergency Response and Reporting) of the SOW. Subject to Section XVI (Covenants by Plaintiff), nothing in this CD, including Section V, Task II, ¶ A.6 of the SOW, limits any authority of Plaintiff: (a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, or (b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site. If, due to PSDs' failure to take appropriate response action under Section V, Task II, ¶ A.6 of the SOW, EPA takes such action instead, PSDs shall reimburse EPA under Section X (Payments for Response Costs and Civil Penalties) for all costs of the response action.

12. **Community Involvement.** If requested by EPA, PSDs shall conduct community involvement activities under EPA's oversight as provided for in, and in accordance with, Section IV (Community Involvement) of the SOW. Such activities may include, but are not

limited to, designation of a Community Involvement Coordinator and implementation of a technical assistance plan.

13. Modification of SOW or Related Deliverables.

a. If EPA determines that it is necessary to modify the work specified in the SOW and/or in deliverables developed under the SOW in order to achieve and/or maintain the Performance Standards or to carry out and maintain the effectiveness of the RA, and such modification is consistent with the Selected Remedy set forth in Section III of the SOW, then EPA may notify PSDs of such modification. If PSDs object to the modification they may, within 30 days after EPA's notification, seek dispute resolution under Section XIV.

b. The SOW and/or related work plans shall be modified: (1) in accordance with the modification issued by EPA; or (2) if PSDs invoke dispute resolution, in accordance with the final resolution of the dispute. The modification shall be incorporated into and enforceable under this CD, and PSDs shall implement all work required by such modification. PSDs shall incorporate the modification into the deliverable required under the SOW, as appropriate.

c. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions as otherwise provided in this CD.

14. Nothing in this CD, the SOW, or any deliverable required under the SOW constitutes a warranty or representation of any kind by Plaintiff that compliance with the work requirements set forth in the SOW or related deliverable will achieve the Performance Standards.

VII. REMEDY REVIEW

15. **Periodic Review.** PSDs shall conduct, in accordance with Section III, ¶ A (Selected Remedy; Components) of the SOW, studies and investigations to support EPA's reviews under Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and applicable regulations, of whether the RA is protective of human health and the environment.

16. **EPA Selection of Further Response Actions.** If EPA determines, at any time, that the RA is not protective of human health and the environment, EPA may select further response actions for the Site in accordance with the requirements of CERCLA and the NCP.

17. **Opportunity to Comment.** PSDs and Cashout Settling Defendants and, if required by Section 113(k)(2) or 117 of CERCLA, 42 U.S.C. § 9613(k)(2) or 9617, the public, will be provided with an opportunity to comment on any further response actions proposed by EPA as a result of the review conducted pursuant to Section 121(c) of CERCLA and to submit written comments for the record during the comment period.

18. **Obligation to Finance and Perform Further Response Actions.** If EPA selects further response actions relating to the Site, EPA may require Cashout Settling Defendants and Settling Repair Defendants to finance and PSDs to perform such further response actions (which, for purposes of the CD, shall be considered part of the Work), but only to the extent that the reopener conditions in ¶ 74 or 75 (United States' Pre- and Post-Certification Reservations) are satisfied. PSDs or Cashout Settling Defendants may invoke the procedures set forth in Section XIV (Dispute Resolution) to dispute (a) EPA's determination that the reopener conditions of

¶ 74 or 75 are satisfied, (b) EPA's determination that the RA is not protective of human health and the environment, or (c) EPA's selection of the further response actions. Disputes regarding EPA's determination that the RA is not protective or EPA's selection of further response actions shall be resolved pursuant to ¶ 54 (Record Review).

19. **Submission of Plans.** If PSDs are required to perform further response actions pursuant to ¶ 18, they shall submit a plan for such response action to EPA for approval in accordance with the procedures of Section VI (Performance of the Work by PSDs). PSDs shall implement the approved plan in accordance with this CD.

VIII. PROPERTY REQUIREMENTS

20. **Agreements Regarding Access and Non-Interference.** PSDs shall, with respect to any Non-Settling Owner's Affected Property, use best efforts to secure from such Non-Settling Owner an agreement, enforceable by PSDs and by Plaintiff, providing that such Non-Settling Owner: (i) provide Plaintiff and the other PSDs, and their representatives, contractors, and subcontractors with access at all reasonable times to such Affected Property to conduct any activity regarding the CD, including those listed in ¶ 20.a (Access Requirements); and (ii) refrain from using such Affected Property in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Material, or interfere with or adversely affect the implementation, integrity, or protectiveness of the Remedial Action.

a. **Access Requirements.** The following is a list of activities for which access is required regarding the Affected Property:

- (1) Conducting or monitoring the Work;
- (2) Verifying any data or information submitted to the United States;
- (3) Conducting investigations regarding contamination at or near the Site;
- (4) Obtaining samples;
- (5) Assessing the need for, planning, or implementing additional response actions at or near the Site;
- (6) Assessing implementation of quality assurance and quality control practices as defined in the approved construction quality assurance quality control plan as provided in the SOW;
- (7) Implementing the Work pursuant to the conditions set forth in ¶ 78 (Work Takeover);
- (8) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by PSDs or their agents, consistent with Section XIX (Access to Information);
- (9) Assessing PSDs' compliance with the CD;

(10) Determining whether the Affected Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the CD; and

(11) Implementing, monitoring, maintaining, reporting on, and enforcing any land, water, or other resource use restrictions and Institutional Controls.

21. **Best Efforts.** As used in this Section, “best efforts” means the efforts that a reasonable person in the position of PSDs would use so as to achieve the goal in a timely manner, including the cost of employing professional assistance and the payment of reasonable sums of money to secure access and/or use restriction agreements. If PSDs are unable to accomplish what is required through “best efforts” in a timely manner, they shall notify the EPA, and include a description of the steps taken to comply with the requirements. If the United States deems it appropriate, it may assist PSDs, or take independent action, in obtaining such access and/or use restrictions. All costs incurred by the United States in providing such assistance or taking such action, including the cost of attorney time and the amount of monetary consideration or just compensation paid, constitute Future Response Costs to be reimbursed under Section X (Payments for Response Costs and Civil Penalties).

22. If EPA determines in a decision document prepared in accordance with the NCP that Institutional Controls in the form of state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices are needed, PSDs shall cooperate with EPA’s efforts to secure and ensure compliance with such Institutional Controls.

23. In the event of any Transfer of the Affected Property, unless the United States otherwise consents in writing, PSDs shall continue to comply with their obligations under the CD, including their obligation to secure access and ensure compliance with any land, water, or other resource use restrictions regarding the Affected Property, and to implement, maintain, monitor, and report on Institutional Controls.

24. Notwithstanding any provision of the CD, Plaintiff retains all of its access authorities and rights, as well as all of its rights to require land, water, or other resource use restrictions and Institutional Controls, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statute or regulations.

IX. FINANCIAL ASSURANCE

25. In order to ensure completion of the Work, PSDs shall secure financial assurance, initially in the amount of \$5,500,000 (“Estimated Cost of the Work”) for the benefit of EPA. The financial assurance must be one or more of the mechanisms listed below, in a form substantially identical to the relevant sample documents available from the “Financial Assurance” category on the Cleanup Enforcement Model Language and Sample Documents Database at <http://cfpub.epa.gov/compliance/models/>, and satisfactory to EPA. PSDs may use multiple mechanisms if they are limited to surety bonds guaranteeing payment, letters of credit, trust funds, escrow accounts, and/or insurance policies.

a. A surety bond guaranteeing payment and/or performance of the Work that is issued by a surety company among those listed as acceptable sureties on federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury;

b. An irrevocable letter of credit, payable to or at the direction of EPA, that is issued by an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency;

c. A trust fund established for the benefit of EPA that is administered by a trustee that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency;

d. A policy of insurance that provides EPA with acceptable rights as a beneficiary thereof and that is issued by an insurance carrier that has the authority to issue insurance policies in the applicable jurisdiction(s) and whose insurance operations are regulated and examined by a federal or state agency;

e. A demonstration by one or more Settling Repair Defendants that each such Settling Repair Defendant meets the relevant financial test criteria of 40 C.F.R. § 264.143(f) and reporting requirements of this Section for the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee, accompanied by a standby funding commitment, which allows PSDs to pay funds to or at the direction of EPA, up to the amount financially assured through the use of this demonstration in the event of a Work Takeover; or

f. A guarantee to fund or perform the Work executed in favor of EPA by one of the following: (1) a direct or indirect parent company of a PSD; or (2) a company that has a “substantial business relationship” (as defined in 40 C.F.R. § 264.141(h)) with a PSD; provided, however, that any company providing such a guarantee must demonstrate to EPA’s satisfaction that it meets the relevant financial test criteria of 40 C.F.R. § 264.143(f) and reporting requirements of this Section for the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee.

g. An escrow account that provides EPA security and rights equivalent to those provided by a trust fund that meets the requirements of 40 C.F.R. § 264.151(a)(1) to finance the Work in accordance with this CD. The escrow account shall provide that the funds placed therein are specifically and irrevocably reserved for the Work. PSDs shall include in any progress reports submitted pursuant to this CD or the SOW a report on the status of payments out of the escrow account. At EPA’s request, PSDs shall make available to EPA any financial reports or other similar documents prepared by the Escrow Agent or other person responsible for approving payments out of the escrow account. Upon completion of the SOW any funds remaining in the escrow account may be disbursed to the Trust.

26. PSDs have selected, and EPA has found satisfactory, as an initial financial assurance an escrow account prepared in accordance with ¶ 25.g. Within 30 days after the Effective Date, or 30 days after EPA’s approval of the form and substance of PSDs’ financial assurance, whichever is later, PSDs shall secure all executed and/or otherwise finalized mechanisms or other documents consistent with the EPA-approved form of financial assurance

and shall submit such mechanisms and documents to the Program Analyst, to the United States, and to EPA as specified in Section XXI (Notices and Submissions).

27. If PSDs provide financial assurance by means of a demonstration or guarantee under ¶ 25.e or 25.f, the affected PSDs shall also comply and shall ensure that their guarantors comply with the other relevant criteria and requirements of 40 C.F.R. § 264.143(f) and this Section, including, but not limited to: (a) the initial submission to EPA of required documents from the affected entity's chief financial officer and independent certified public accountant no later than 30 days after the Effective Date; (b) the annual resubmission of such documents within 90 days after the close of each such entity's fiscal year; and (c) the notification of EPA no later than 30 days, in accordance with ¶ 28, after any such entity determines that it no longer satisfies the relevant financial test criteria and requirements set forth at 40 C.F.R. § 264.143(f)(1). PSDs agree that EPA may also, based on a belief that an affected entity may no longer meet the financial test requirements of ¶ 25.e or 25.f, require reports of financial condition at any time from such entity in addition to those specified in this Paragraph. For purposes of this Section, references in 40 C.F.R. Part 264, Subpart H, to: (1) the terms "current closure cost estimate," "current post-closure cost estimate," and "current plugging and abandonment cost estimate" include the Estimated Cost of the Work; (2) the phrase "the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates" includes the sum of all environmental obligations (including obligations under CERCLA, RCRA, and any other federal, state, or tribal environmental obligation) guaranteed by such company or for which such company is otherwise financially obligated in addition to the Estimated Cost of the Work under this CD; (3) the terms "owner" and "operator" include each PSD making a demonstration or obtaining a guarantee under ¶ 25.e or 25.f; and (4) the terms "facility" and "hazardous waste management facility" include the Site.

28. PSDs shall diligently monitor the adequacy of the financial assurance. If any PSD becomes aware of any information indicating that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, such PSD shall notify EPA of such information within 7 days. If EPA determines that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, EPA will notify the affected PSD of such determination. PSDs shall, within 30 days after notifying EPA or receiving notice from EPA under this Paragraph, secure and submit to EPA for approval a proposal for a revised or alternative financial assurance mechanism that satisfies the requirements of this Section. EPA may extend this deadline for such time as is reasonably necessary for the affected PSD, in the exercise of due diligence, to secure and submit to EPA a proposal for a revised or alternative financial assurance mechanism, not to exceed 60 days. PSDs shall follow the procedures of ¶ 30 (Modification of Amount, Form, or Terms of Financial Assurance) in seeking approval of, and submitting documentation for, the revised or alternative financial assurance mechanism. PSDs' inability to secure and submit to EPA financial assurance in accordance with this Section shall in no way excuse performance of any other requirements of this CD, including, without limitation, the obligation of PSDs to complete the Work in accordance with the terms of this CD.

29. Access to Financial Assurance.

a. If EPA issues a notice of implementation of a Work Takeover under ¶ 78.b, then, in accordance with any applicable financial assurance mechanism and/or related

standby funding commitment, EPA is entitled to: (1) the performance of the Work; and/or (2) require that any funds guaranteed be paid in accordance with ¶ 29.d.

b. If EPA is notified by the issuer of a financial assurance mechanism that it intends to cancel such mechanism, and the affected PSD fails to provide an alternative financial assurance mechanism in accordance with this Section at least 30 days prior to the cancellation date, the funds guaranteed under such mechanism must be paid prior to cancellation in accordance with ¶ 29.d.

c. If, upon issuance of a notice of implementation of a Work Takeover under ¶ 78.b, either: (1) EPA is unable for any reason to promptly secure the resources guaranteed under any applicable financial assurance mechanism and/or related standby funding commitment, whether in cash or in kind, to continue and complete the Work; or (2) the financial assurance is provided under ¶ 25.e or 25.f, then EPA may demand an amount, as determined by EPA, sufficient to cover the cost of the remaining Work to be performed. PSDs shall, within 5 days of such demand, pay the amount demanded as directed by EPA.

d. Any amounts required to be paid under this ¶ 29 shall be, as directed by EPA: (i) paid to EPA in order to facilitate the completion of the Work by EPA or by another person; or (ii) deposited into an interest-bearing account, established at a duly chartered bank or trust company that is insured by the FDIC, in order to facilitate the completion of the Work by another person. If payment is made to EPA, EPA may deposit the payment into the EPA Hazardous Substance Superfund or into the Ward Transformer Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

e. All EPA Work Takeover costs not paid under this ¶ 29 must be reimbursed as Future Response Costs under Section X (Payments for Response Costs and Civil Penalties).

30. **Modification of Amount, Form, or Terms of Financial Assurance.** PSDs may submit, on any anniversary of the Effective Date or at any other time agreed to by the Parties, a request to reduce the amount, or change the form or terms, of the financial assurance mechanism. Any such request must be submitted to EPA in accordance with ¶ 26, and must include an estimate of the cost of the remaining Work, an explanation of the bases for the cost calculation, and a description of the proposed changes, if any, to the form or terms of the financial assurance. EPA will notify PSDs of its decision to approve or disapprove a requested reduction or change pursuant to this Paragraph. PSDs may reduce the amount of the financial assurance mechanism only in accordance with: (a) EPA's approval; or (b) if there is a dispute, the agreement, final administrative decision, or final judicial decision resolving such dispute under Section XIV (Dispute Resolution). Any decision made by EPA on a request submitted under this Paragraph to change the form or terms of a financial assurance mechanism shall be made in EPA's sole and unreviewable discretion, and such decision shall not be subject to challenge by PSDs pursuant to the dispute resolution provisions of this CD or in any other forum. Within 30 days after receipt of EPA's approval of, or the agreement or decision resolving a dispute relating to, the requested modifications pursuant to this Paragraph, PSDs shall submit to EPA documentation of the reduced, revised, or alternative financial assurance mechanism in accordance with ¶ 26.

31. **Release, Cancellation, or Discontinuation of Financial Assurance.** PSDs may release, cancel, or discontinue any financial assurance provided under this Section only: (a) if EPA issues a Certification of Work Completion under Section V, Task II, ¶ D.1 (Remedial Action Report) of the SOW; (b) in accordance with EPA's approval of such release, cancellation, or discontinuation; or (c) if there is a dispute regarding the release, cancellation or discontinuance of any financial assurance, in accordance with the agreement, final administrative decision, or final judicial decision resolving such dispute under Section XIV (Dispute Resolution).

X. PAYMENTS FOR RESPONSE COSTS AND CIVIL PENALTIES

32. Payments Due to the Trust

a. Cashout Payments and Initial Payments.

(1) Each Sales-Only Cashout Settling Defendant has submitted to the Trust its payment as specified in Appendix A to this CD. Each Cashout Settling Defendant has submitted to the Trust its payment as specified in Appendix B to this CD. Each Settling Repair Defendant has submitted to the Trust its initial payment as specified in Appendix C to this CD.

(2) The Trust shall transmit funds in the Trust to the escrow account pursuant to ¶ 26.

(3) As soon as reasonably practicable after the Effective Date, the Sales-Only Cashout Settling Federal Agency shall pay \$10,000 to the Trust. If the payment is not made within 90 days after the Effective Date, the Sales-Only Cashout Settling Federal Agency shall pay Interest on the unpaid balance, with such Interest commencing on the 91st day after the Effective Date.

(4) As soon as reasonably practicable after the Effective Date, the United States, on behalf of the Cashout Settling Federal Agencies, shall pay \$1,089,000 to the Trust. If the payment is not made within 90 days after the Effective Date, the United States shall pay Interest on the unpaid balance, with such Interest commencing on the 91st day after the Effective Date. The Parties to this Consent Decree recognize and acknowledge that the payment obligation can only be paid from appropriated funds legally available for such purpose. Nothing in this Consent Decree shall be interpreted or construed as a commitment or requirement that any Cashout Settling Federal Agency obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable provision of the law.

b. Any Future Assessments. Within 60 days after the receipt of any future assessment from the Trust, each Settling Repair Defendant shall pay its assessment to the Trust in accordance with Appendix C. Payments shall be paid by mailing a check, payable to "Ward Superfund OU1 Trust Fund," to

Thomas G. Claassen CPA, ABV, CFE
Shareholder
Schneider Downs & Co., Inc.
One PPG Place, Suite 1700
Pittsburgh, PA 15222

Payments for any future assessments may also be made via wire transfer. The Financial Trustee will distribute wire transfer instructions to each Settling Repair Defendant within sixty (60) days of the Effective Date.

33. Payment by Carr & Duff, Inc. for Civil Penalties.

a. Within 30 days after the Effective Date, and subject to ¶ E of this CD, Settling Repair Defendant Carr & Duff, Inc. shall pay the United States a sum of \$40,000 in full and final settlement of the United States' claim for civil penalties under Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Payment shall be made in accordance with ¶ 35. The total amount to be paid by Carr & Duff, Inc. pursuant to this Paragraph shall be deposited in the EPA Hazardous Substance Superfund.

b. In the event that the payment required by ¶ 33.a is not made by the date required, Carr & Duff, Inc. shall pay Interest on the unpaid balance. Interest shall begin to accrue on the Effective Date and shall accrue through the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiff by virtue of Carr & Duff, Inc.'s failure to make timely payment under this Paragraph, including, but not limited to, payment of stipulated penalties pursuant to Section XV (Stipulated Penalties).

c. Carr & Duff, Inc. shall not deduct any civil penalties paid pursuant to this Paragraph in calculating its federal income tax.

34. Payments by PSDs for Future Response Costs. PSDs shall pay to EPA all Future Response Costs not inconsistent with the NCP.

a. **Periodic Bills for Future Response Costs.** On a periodic basis, if any Future Response Costs have been incurred, EPA will send PSDs a bill requiring payment that includes a SCORPIOS Report which includes direct and indirect costs incurred by EPA, its contractors, subcontractors, and DOJ. PSDs shall make all payments within 30 days after PSDs' receipt of each bill requiring payment, except as otherwise provided in ¶ 34.c, in accordance with ¶ 35.

b. **Deposit of Future Response Costs Payments.** The total amount to be paid by PSDs pursuant to ¶ 34.a (Periodic Bills for Future Response Costs) shall be deposited by EPA in the Ward Transformer Special Account to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund, provided, however, that EPA may deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund if, at the time the payment is received, EPA estimates that the Ward Transformer Special Account balance is sufficient to address currently anticipated future response actions to be conducted or financed by EPA at or in connection with the Site.

c. **Contesting Future Response Costs.** PSDs may submit a Notice of Dispute, initiating the procedures of Section XIV (Dispute Resolution), regarding any Future Response Costs billed under ¶ 34.a (Periodic Bills for Future Response Costs) if they determine that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if they believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. Such Notice

of Dispute shall be submitted in writing within 30 days after receipt of the bill and must be sent to the United States pursuant to Section XXI (Notices and Submissions). Such Notice of Dispute shall specifically identify the contested Future Response Costs and the basis for objection. If PSDs submit a Notice of Dispute, PSDs shall within the 30-day period, also as a requirement for initiating the dispute, (a) pay all uncontested Future Response Costs to the United States, and (b) establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation (“FDIC”), and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. PSDs shall send to the United States, as provided in Section XXI (Notices and Submissions), a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. If the United States prevails in the dispute, PSDs shall pay the sums due (with accrued interest) to the United States within 7 days after the resolution of the dispute. If PSDs prevail concerning any aspect of the contested costs, PSDs shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to the United States within 7 days after the resolution of the dispute. PSDs shall be disbursed any balance of the escrow account. All payments to the United States under this Paragraph shall be made in accordance with ¶ 35.a. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XIV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding PSDs’ obligation to reimburse the United States for its Future Response Costs.

d. **Interest.** In the event that any payment for Future Response Costs required under this Section is not made by the date required, PSDs shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill. The Interest shall accrue through the date of PSDs’ payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiff by virtue of PSDs’ failure to make timely payments under this Section including, but not limited to, payment of stipulated penalties pursuant to ¶ 58 (Stipulated Penalty Amounts – Work).

e. Future Response Costs, if not inconsistent with the NCP, may be submitted by PSDs to the Trust for payment.

35. **Payment Instructions.**

a. The Financial Litigation Unit (“FLU”) of the United States Attorney’s Office for the Eastern District of North Carolina shall provide PSDs and Carr & Duff, Inc., in accordance with ¶ 102, with instructions regarding making payments to DOJ on behalf of EPA. The instructions must include a Consolidated Debt Collection System (“CDCS”) number to identify payments made under this CD.

b. All payments subject to this ¶ 35 shall be made by Fedwire Electronic Funds Transfer (“EFT”) to the U.S. DOJ account, in accordance with the instructions provided under ¶ 35.a, and including references to the CDCS Number, Site/Spill ID Number A4S4, and DJ Number 90-11-2-07152/2. The Fedwire EFT payment must be sent as follows:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read
“D 68010727 Environmental Protection Agency”

c. For all payments required to be made in accordance with this ¶ 35, PSDs or Carr & Duff, Inc., as applicable, shall send notices that payment has been made to the United States, EPA, and the EPA Cincinnati Finance Center, all in accordance with ¶ 102. All notices must include references to the Site/Spill ID and DJ numbers.

XI. DISBURSEMENT OF SPECIAL ACCOUNT FUNDS

36. Creation of Ward Transformer Disbursement Special Account and Agreement to Disburse Funds to PSDs. Within 30 days after the Effective Date, EPA shall establish the Ward Transformer Disbursement Special Account and shall transfer \$405,000 from the Ward Transformer Special Account to the Ward Transformer Disbursement Special Account. Subject to the terms and conditions set forth in this Section, EPA agrees to make the funds in the Ward Transformer Disbursement Special Account, including Interest Earned on the funds in the Ward Transformer Disbursement Special Account, available for disbursement to PSDs as partial reimbursement for performance of the Work. EPA shall disburse funds by wire transfer from the Ward Transformer Disbursement Special Account to the Trust in accordance with the procedures and milestones for phased disbursement set forth in this Section.

37. Timing, Amount, and Method of Disbursing Funds From the Ward Transformer Disbursement Special Account. Within 30 days after EPA’s receipt of a Cost Summary and Certification, as defined by ¶ 38.b, or if EPA has requested additional information under ¶ 38.b or a revised Cost Summary and Certification under ¶ 38.c, within 15 days after receipt of the additional information or revised Cost Summary and Certification, and subject to the conditions set forth in this Section, EPA shall disburse the funds from the Ward Transformer Disbursement Special Account at the completion of the following milestones, and in the amounts set forth below:

Milestone	Disbursement of Funds
EPA approval of RA Work Plan	35% of funds in the Ward Transformer Disbursement Special Account
PSDs’ expenditure of \$3,700,000 on Work, excluding costs set forth in ¶ 39 (Costs Excluded from Disbursement)	Remainder of funds in the Ward Transformer Disbursement Special Account

EPA shall disburse the funds from the Ward Transformer Disbursement Special Account to PSDs by mailing a check, payable to “Ward Superfund OUI Trust Fund,” to:

Thomas G. Claassen CPA, ABV, CFE
Shareholder
Schneider Downs & Co., Inc.
One PPG Place, Suite 1700
Pittsburgh, PA 15222

Payments for any future assessments may also be made via wire transfer. The Financial Trustee will distribute wire transfer instructions to EPA within sixty (60) days of the Effective Date.

38. Requests for Disbursement of Special Account Funds.

a. Within 5 days after issuance of EPA’s written confirmation from the EPA Project Coordinator that a milestone of the Work, as defined in ¶ 37 (Timing, Amount, and Method of Disbursing Funds), has been satisfactorily completed, PSDs shall submit to EPA a Cost Summary and Certification, as defined in ¶ 38.b, covering the Work performed up to the date of completion of that milestone. PSDs shall not include in any submission costs included in a previous Cost Summary and Certification following completion of an earlier milestone of the Work if those costs have been previously sought or reimbursed pursuant to ¶ 37.

b. Each Cost Summary and Certification shall include a complete and accurate written cost summary and certification of the necessary costs incurred and paid by PSDs for the Work covered by the particular submission, excluding costs not eligible for disbursement under ¶ 39 (Costs Excluded from Disbursement). Each Cost Summary and Certification shall contain the following statement signed by an independent certified public accountant or other specified independent person acceptable to EPA:

To the best of my knowledge, after thorough investigation and review of PSDs’ documentation of costs incurred and paid for Work performed pursuant to this CD up to the date of completion of milestone __, I certify that the information contained in or accompanying this submission is true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

The independent certified public accountant or other specified independent person acceptable to EPA shall also provide EPA a list of the documents that he or she reviewed in support of the Cost Summary and Certification. Upon request by EPA, PSDs shall submit to EPA any additional information that EPA deems necessary for its review and approval of a Cost Summary and Certification.

c. If EPA finds that a Cost Summary and Certification includes a mathematical error, costs excluded under ¶ 39 (Costs Excluded from Disbursement), costs that are inadequately documented, or costs submitted in a prior Cost Summary and Certification, it will notify PSDs and provide them an opportunity to cure the deficiency by submitting a revised Cost Summary and Certification. If PSDs fail to cure the deficiency within 30 days after being notified of, and given the opportunity to cure, the deficiency, EPA will recalculate PSDs’ costs eligible for disbursement for that submission and disburse the corrected amount to PSDs in

accordance with the procedures in ¶ 37 (Timing, Amount, and Method of Disbursing Funds). PSDs may dispute EPA's recalculation under this Paragraph pursuant to Section XIV (Dispute Resolution). In no event shall PSDs be disbursed funds from the Ward Transformer Disbursement Special Account in excess of amounts properly documented in a Cost Summary and Certification accepted or modified by EPA.

39. **Costs Excluded from Disbursement.** The following costs are excluded from, and shall not be sought by PSDs for, disbursement from the Ward Transformer Disbursement Special Account: (a) response costs paid pursuant to Section X (Payments for Response Costs and Civil Penalties); (b) any other payments made by PSDs to the United States pursuant to this CD, including, but not limited to, any Interest or stipulated penalties paid pursuant to Section X (Payments for Response Costs and Civil Penalties) or XV (Stipulated Penalties); (c) attorneys' fees and costs, except for reasonable attorneys' fees and costs necessarily related to any obligations under the CD for which legal services are essential, such as obtaining access or institutional controls as required by Section VIII (Property Requirements); (d) costs of any response activities PSDs perform that are not required under, or approved by EPA pursuant to, this CD; (e) costs related to PSDs' litigation, settlement, development of potential contribution claims, or identification of defendants; (f) internal costs of PSDs, including but not limited to, salaries, travel, or in-kind services, except for those costs that represent the work of employees of PSDs directly performing the Work; (g) any costs incurred by PSDs prior to the Effective Date or (h) any costs incurred by PSDs pursuant to Section XIV (Dispute Resolution).

40. **Termination of Disbursements from the Special Account.** EPA's obligation to disburse funds from the Ward Transformer Disbursement Special Account under this CD shall terminate upon EPA's determination that PSDs: (a) have knowingly submitted a materially false or misleading Cost Summary and Certification; (b) have submitted a materially inaccurate or incomplete Cost Summary and Certification, and have failed to correct the materially inaccurate or incomplete Cost Summary and Certification within 30 days after being notified of, and given the opportunity to cure, the deficiency; or (c) failed to submit a Cost Summary and Certification as required by ¶ 38 (Requests for Disbursement of Special Account Funds) within 30 days (or such longer period as EPA agrees) after being notified that EPA intends to terminate its obligation to make disbursements pursuant to this Section because of PSDs' failure to submit the Cost Summary and Certification as required by ¶ 38. EPA's obligation to disburse funds from the Ward Transformer Disbursement Special Account shall also terminate upon EPA's assumption of performance of any portion of the Work pursuant to ¶ 78 (Work Takeover), when such assumption of performance of the Work is not challenged by PSDs or, if challenged, is upheld under Section XIV (Dispute Resolution). PSDs may dispute EPA's termination of special account disbursements under Section XIV.

41. **Recapture of Special Account Disbursements.** Upon termination of disbursements from the Ward Transformer Disbursement Special Account under ¶ 40 (Termination of Disbursements from the Special Account), if EPA has previously disbursed funds from the Ward Transformer Disbursement Special Account for activities specifically related to the reason for termination, e.g., discovery of a materially false or misleading submission after disbursement of funds based on that submission, EPA shall submit a bill to PSDs for those amounts already disbursed from the Ward Transformer Disbursement Special Account specifically related to the reason for termination, plus Interest on that amount covering the period from the date of disbursement of the funds by EPA to the date of repayment of the

funds by PSDs. Within 30 days after receipt of EPA's bill, PSDs shall reimburse the EPA Hazardous Substance Superfund for the total amount billed. Payment shall be made in accordance with ¶ 35.a. Upon receipt of payment, EPA may deposit all or any portion thereof in the Ward Transformer Special Account, the Ward Transformer Disbursement Special Account, or the EPA Hazardous Substance Superfund. The determination of where to deposit or how to use the funds shall not be subject to challenge by PSDs pursuant to the dispute resolution provisions of this CD or in any other forum. PSDs may dispute EPA's determination as to recapture of funds pursuant to Section XIV (Dispute Resolution).

42. **Balance of Special Account Funds.** After EPA issues its written Certification of RA Completion pursuant to this CD, and after EPA completes all disbursement to PSDs in accordance with this Section, if any funds remain in the Ward Transformer Disbursement Special Account, EPA may transfer such funds to the Ward Transformer Special Account or to the EPA Hazardous Substance Superfund. Any transfer of funds to the Ward Transformer Special Account or the EPA Hazardous Substance Superfund shall not be subject to challenge by PSDs pursuant to the dispute resolution provisions of this CD or in any other forum.

XII. INDEMNIFICATION AND INSURANCE

43. PSDs' Indemnification of the United States.

a. The United States does not assume any liability by entering into this CD or by virtue of any designation of PSDs as EPA's authorized representatives under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e). PSDs shall indemnify, save, and hold harmless the United States and its officials, agents, employees, contractors, subcontractors, and representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of PSDs, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on PSDs' behalf or under their control, in carrying out activities pursuant to this CD, including, but not limited to, any claims arising from any designation of PSDs as EPA's authorized representatives under Section 104(e) of CERCLA. Further, PSDs agree to pay the United States all costs it incurs including, but not limited to, attorneys' fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States based on negligent or other wrongful acts or omissions of PSDs, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this CD. The United States shall not be held out as a party to any contract entered into by or on behalf of PSDs in carrying out activities pursuant to this CD. Neither PSDs nor any such contractor shall be considered an agent of the United States.

b. The United States shall give PSDs notice of any claim for which the United States plans to seek indemnification pursuant to this ¶ 43, and shall consult with PSDs prior to settling such claim. Any dispute over a claim by the United States for indemnification shall be resolved pursuant to the dispute resolution procedures set forth in Section XIV (Dispute Resolution).

44. PSDs covenant not to sue and agree not to assert any claims or causes of action against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or

arrangement between any one or more of PSDs and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, PSDs shall indemnify, save and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of PSDs and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

45. **Insurance.** No later than 15 days before commencing any on-Site Work, PSDs shall secure, and shall maintain until the first anniversary after issuance of EPA's Certification of RA Completion pursuant to Section V, Task II, ¶ D.1 (Remedial Action Report) of the SOW commercial general liability insurance with limits of \$2,000,000, for any one occurrence, and automobile liability insurance with limits of \$2,000,000, combined single limit, naming the United States as an additional insured with respect to all liability arising out of the activities performed by or on behalf of PSDs pursuant to this CD. In addition, for the duration of this CD, PSDs shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of PSDs in furtherance of this CD. Prior to commencement of the Work, PSDs shall provide to EPA certificates of such insurance and a copy of each insurance policy. PSDs shall resubmit such certificates and copies of policies each year on the anniversary of the Effective Date. If PSDs demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, PSDs need provide only that portion of the insurance described above that is not maintained by the contractor or subcontractor.

XIII. FORCE MAJEURE

46. "Force majeure," for purposes of this CD, is defined as any event arising from causes beyond the control of PSDs, of any entity controlled by PSDs, or of PSDs' contractors that delays or prevents the performance of any obligation under this CD despite PSDs' best efforts to fulfill the obligation. The requirement that PSDs exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure and best efforts to address the effects of any potential force majeure (a) as it is occurring and (b) following the potential force majeure such that the delay and any adverse effects of the delay are minimized to the greatest extent possible. "Force majeure" does not include financial inability to complete the Work or a failure to achieve the Performance Standards.

47. If any event occurs or has occurred that may delay the performance of any obligation under this CD for which PSDs intend or may intend to assert a claim of force majeure, PSDs shall notify EPA's Project Coordinator orally or, in his or her absence, EPA's Alternate Project Coordinator or, in the event both of EPA's designated representatives are unavailable, the Director of the Superfund Division, EPA Region 4, within 5 days of when PSDs first knew that the event might cause a delay. Within 7 days thereafter, PSDs shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; PSDs' rationale for attributing such delay to a force majeure; and a statement as to whether, in the opinion of PSDs, such event may cause or contribute to an endangerment to public health or

welfare, or the environment. PSDs shall include with any notice all available documentation supporting their claim that the delay was attributable to a force majeure. PSDs shall be deemed to know of any circumstance of which PSDs, any entity controlled by PSDs, or PSDs' contractors or subcontractors knew or should have known. Failure to comply with the above requirements regarding an event shall preclude PSDs from asserting any claim of force majeure regarding that event, provided, however, that if EPA, despite the late or incomplete notice, is able to assess to its satisfaction whether the event is a force majeure under ¶ 46 and whether PSDs have exercised their best efforts under ¶ 46, EPA may, in its unreviewable discretion, excuse in writing PSDs' failure to submit timely or complete notices under this Paragraph.

48. If EPA agrees that the delay or anticipated delay is attributable to a force majeure, the time for performance of the obligations under this CD that are affected by the force majeure will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure, EPA will notify PSDs in writing of its decision. If EPA agrees that the delay is attributable to a force majeure, EPA will notify PSDs in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure.

49. If PSDs elect to invoke the dispute resolution procedures set forth in Section XIV (Dispute Resolution) regarding EPA's decision, they shall do so no later than 15 days after receipt of EPA's notice. In any such proceeding, PSDs shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that PSDs complied with the requirements of ¶¶ 46 and 47. If PSDs carry this burden, the delay at issue shall be deemed not to be a violation by PSDs of the affected obligation of this CD identified to EPA and the Court.

50. The failure by EPA to timely complete any obligation under the CD or under the SOW is not a violation of the CD, provided, however, that if such failure prevents PSDs from meeting one or more deadlines in the SOW, PSDs may seek relief under this Section.

XIV. DISPUTE RESOLUTION

51. Unless otherwise expressly provided for in this CD, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes regarding this CD. However, the procedures set forth in this Section shall not apply to actions by the United States to enforce obligations of PSDs that have not been disputed in accordance with this Section.

52. A dispute shall be considered to have arisen when one party sends the other parties a written Notice of Dispute. Any dispute regarding this CD shall in the first instance be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed 20 days from the time the dispute arises, unless it is modified by written agreement of the parties to the dispute.

53. Statements of Position.

a. In the event that the parties cannot resolve a dispute by informal negotiations under the preceding Paragraph, then the position advanced by EPA shall be considered binding unless, within 30 days after the conclusion of the informal negotiation period, the PSDs and, where applicable, Cashout Settling Defendants invoke the formal dispute resolution procedures of this Section by serving on the United States a written Statement of Position on the matter in dispute, including, but not limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the PSDs and, where applicable, Cashout Settling Defendants. The Statement of Position shall specify the PSDs' and, where applicable, Cashout Settling Defendants' position as to whether formal dispute resolution should proceed under ¶¶ 54 (Record Review) or 55.

b. Within 15 days after receipt of the PSDs' and, where applicable, Cashout Settling Defendants' Statement of Position, EPA will serve on the PSDs and, where applicable, Cashout Settling Defendants its Statement of Position, including, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by EPA. EPA's Statement of Position shall include a statement as to whether formal dispute resolution should proceed under ¶¶ 54 (Record Review) or 55. Within 15 days after receipt of EPA's Statement of Position, the PSDs and, where applicable, Cashout Settling Defendants may submit a reply.

c. If there is disagreement between EPA and the PSDs and, where applicable, Cashout Settling Defendants as to whether dispute resolution should proceed under ¶¶ 54 (Record Review) or 55, the parties to the dispute shall follow the procedures set forth in the Paragraph determined by EPA to be applicable. However, if PSDs and, where applicable, Cashout Settling Defendants ultimately appeal to the Court to resolve the dispute, the Court shall determine which Paragraph is applicable in accordance with the standards of applicability set forth in ¶¶ 54 and 55.

54. Record Review. Formal dispute resolution for disputes pertaining to the selection or adequacy of any response action and all other disputes that are accorded review on the administrative record under applicable principles of administrative law shall be conducted pursuant to the procedures set forth in this Paragraph. For purposes of this Paragraph, the adequacy of any response action includes, without limitation, the adequacy or appropriateness of plans, procedures to implement plans, or any other items requiring approval by EPA under this CD, and the adequacy of the performance of response actions taken pursuant to this CD. Nothing in this CD shall be construed to allow any dispute by PSDs and, where applicable, Cashout Settling Defendants regarding the validity of the OU1 ROD's provisions.

a. An administrative record of the dispute shall be maintained by EPA and shall contain all statements of position, including supporting documentation, submitted pursuant to this Section. Where appropriate, EPA may allow submission of supplemental statements of position by the parties to the dispute.

b. The Director of the Superfund Division, EPA Region 4, will issue a final administrative decision resolving the dispute based on the administrative record described in ¶ 54.a. This decision shall be binding upon PSDs and, where applicable, Cashout Settling Defendants, subject only to the right to seek judicial review pursuant to ¶¶ 54.c and 54.d.

c. Any administrative decision made by EPA pursuant to ¶ 54.b shall be reviewable by this Court, provided that a motion for judicial review of the decision is filed by PSDs and, where applicable, Cashout Settling Defendants with the Court and served on all Parties within 10 days after receipt of EPA's decision. The motion shall include a description of the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of this CD. The United States may file a response to PSDs' and, where applicable, Cashout Settling Defendants' motion.

d. In proceedings on any dispute governed by this Paragraph, PSDs and, where applicable, Cashout Settling Defendants shall have the burden of demonstrating that the decision of the Superfund Division Director is arbitrary and capricious or otherwise not in accordance with law. Judicial review of EPA's decision shall be on the administrative record compiled pursuant to ¶ 54.a.

55. Formal dispute resolution for disputes that neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record under applicable principles of administrative law, shall be governed by this Paragraph.

a. The Director of the Superfund Division, EPA Region 4, will issue a final decision resolving the dispute based on the statements of position and reply, if any, served under ¶ 53. The Superfund Division Director's decision shall be binding on PSDs and, where applicable, Cashout Settling Defendants unless, within 10 days after receipt of the decision, PSDs and, where applicable, Cashout Settling Defendants file with the Court and serve on the parties a motion for judicial review of the decision setting forth the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of the CD. The United States may file a response to PSDs' and, where applicable, Cashout Settling Defendants' motion.

b. Notwithstanding ¶ O (CERCLA § 113(j) record review of OU1 ROD and Work) of Section I (Background), judicial review of any dispute governed by this Paragraph shall be governed by applicable principles of law.

56. The invocation of formal dispute resolution procedures under this Section does not extend, postpone, or affect in any way any obligation of PSDs and, where applicable, Cashout Settling Defendants under this CD, except as provided in ¶ 34.c (Contesting Future Response Costs), as agreed by EPA, or as determined by the Court. Stipulated penalties with respect to the disputed matter shall continue to accrue, but payment shall be stayed pending resolution of the dispute, as provided in ¶ 64. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this CD. In the event that PSDs and, where applicable, Cashout Settling Defendants do not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XV (Stipulated Penalties).

XV. STIPULATED PENALTIES

57. PSDs shall be liable for stipulated penalties in the amounts set forth in ¶¶ 58 and 59 to the United States for failure to comply with the requirements of this CD specified below, unless excused under Section XIII (Force Majeure). "Compliance" by PSDs shall include

completion of all activities and obligations, including payments, required under this CD, or any deliverable approved under this CD, in accordance with all applicable requirements of law, this CD, the SOW, and any deliverables approved under this CD and within the specified time schedules established by and approved under this CD.

58. Stipulated Penalty Amounts - Work (Including Payments of Future Response Costs and Excluding Deliverables) and Payment of Civil Penalties by Carr & Duff, Inc.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in ¶ 58.b:

Period of Noncompliance	Penalty Per Violation Per Day
1st through 14th day	\$2000
15th through 30th day	\$2500
31st day and beyond	\$3000

b. Compliance Milestones.

- (1) Failure to timely or adequately submit a draft, modified or final:
 - (a) RD Work Plan
 - (b) Prefinal (90%)/Final Design
 - (c) RA Work Plan
 - (d) Final Construction Report
 - (e) Performance Standards Verification Plan
 - (f) Proof of Insurance
- (2) Failure to establish or maintain financial assurance in compliance with the timelines and other substantive and procedural requirements of Section IX (Financial Assurance).
- (3) Failure to timely pay Future Response Costs as required by ¶ 34.
- (4) Failure to timely pay civil penalties as required by ¶ 33 (applicable only to Settling Repair Defendant Carr & Duff, Inc.).

59. Stipulated Penalty Amounts - Deliverables.

a. **Material Defects.** If an initially submitted or resubmitted deliverable contains a material defect, and the deliverable is disapproved or modified by EPA under Section V (Planning and Deliverables) of the SOW due to such material defect, then the material defect shall constitute a lack of compliance for purposes of ¶ 57. The provisions of Section XIV (Dispute Resolution) and Section XV (Stipulated Penalties) shall govern the accrual and payment of any stipulated penalties regarding PSDs' submissions under this CD.

b. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate deliverables pursuant to the CD:

Period of Noncompliance	Penalty Per Violation Per Day
1st through 14th day	\$1000
15th through 30th day	\$1500
31st day and beyond	\$2000

60. In the event that EPA assumes performance of a portion or all of the Work pursuant to ¶ 78 (Work Takeover), PSDs shall be liable for a stipulated penalty in the amount of \$500,000. Stipulated penalties under this Paragraph are in addition to the remedies available under ¶¶ 29 (Access to Financial Assurance) and 78 (Work Takeover).

61. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Section V (Planning and Deliverables) of the SOW, during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies PSDs of any deficiency; (b) with respect to a decision by the Director of the Superfund Division, EPA Region 4, under ¶¶ 54.b or 55.a of Section XIV (Dispute Resolution), during the period, if any, beginning on the 21st day after the date that PSDs' reply to EPA's Statement of Position is received until the date that the Director issues a final decision regarding such dispute; or (c) with respect to judicial review by this Court of any dispute under Section XIV (Dispute Resolution), during the period, if any, beginning on the 31st day after the Court's receipt of the final submission regarding the dispute until the date that the Court issues a final decision regarding such dispute. Nothing in this CD shall prevent the simultaneous accrual of separate penalties for separate violations of this CD.

62. Following EPA's determination that PSDs have failed to comply with a requirement of this CD, EPA may give PSDs written notification of the same and describe the noncompliance. EPA may send PSDs a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified PSDs of a violation.

63. All penalties accruing under this Section shall be due and payable to the United States within 30 days after PSDs' receipt from EPA of a demand for payment of the penalties, unless PSDs invoke the Dispute Resolution procedures under Section XIV (Dispute Resolution) within the 30-day period. All payments to the United States under this Section shall indicate that the payment is for stipulated penalties and shall be made in accordance with ¶ 35.a.

64. Penalties shall continue to accrue as provided in ¶ 61 during any dispute resolution period, but need not be paid until the following:

a. If the dispute is resolved by agreement of the parties or by a decision of EPA that is not appealed to this Court, accrued penalties determined to be owed shall be paid to EPA within 15 days after the agreement or the receipt of EPA's decision or order;

b. If the dispute is appealed to this Court and the United States prevails in whole or in part, PSDs shall pay all accrued penalties determined by the Court to be owed to EPA within 60 days after receipt of the Court's decision or order, except as provided in ¶ 64.c;

c. If the District Court's decision is appealed by any Party, PSDs shall pay all accrued penalties determined by the District Court to be owed to the United States into an interest-bearing escrow account, established at a duly chartered bank or trust company that is insured by the FDIC, within 60 days after receipt of the Court's decision or order. Penalties shall be paid into this account as they continue to accrue, at least every 60 days. Within 15 days after receipt of the final appellate court decision, the escrow agent shall pay the balance of the account to EPA or to PSDs to the extent that they prevail.

65. If PSDs fail to pay stipulated penalties when due, PSDs shall pay Interest on the unpaid stipulated penalties as follows: (a) if PSDs have timely invoked dispute resolution such that the obligation to pay stipulated penalties has been stayed pending the outcome of dispute resolution, Interest shall accrue from the date stipulated penalties are due pursuant to ¶ 64 until the date of payment; and (b) if PSDs fail to timely invoke dispute resolution, Interest shall accrue from the date of the demand under ¶ 63 until the date of payment. If PSDs fail to pay stipulated penalties and Interest when due, the United States may institute proceedings to collect the penalties and Interest.

66. The payment of penalties and Interest, if any, shall not alter in any way PSDs' obligation to complete the performance of the Work required under this CD.

67. Nothing in this CD shall be construed as prohibiting, altering, or in any way limiting the ability of the United States to seek any other remedies or sanctions available by virtue of PSDs' violation of this CD or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), provided, however, that the United States shall not seek civil penalties pursuant to Section 122(l) of CERCLA for any violation for which a stipulated penalty is provided in this CD, except in the case of a willful violation of this CD.

68. Notwithstanding any other provision of this Section, the United States may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this CD.

XVI. COVENANTS BY PLAINTIFF

69. Covenants for PSDs by United States.

Except as provided in ¶¶ 74, 75 (United States' Pre- and Post-Certification Reservations), and 77 (General Reservations of Rights), the United States covenants not to sue or to take administrative action against PSDs pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. Except with respect to future liability, these covenants shall take effect upon the Effective Date. With respect to future liability, these covenants shall take effect upon Certification of RA Completion by EPA pursuant to Section V, Task II, ¶ D.1 (Remedial Action Report) of the SOW. These covenants are conditioned upon the satisfactory performance by PSDs of their obligations under this CD. These covenants extend only to PSDs and do not extend to any other person.

70. Covenants for Cashout Settling Defendants by United States.

Except as provided in ¶¶ 74, 75 (United States' Pre- and Post-Certification Reservations), and 77 (General Reservations of Rights), the United States covenants not to sue or to take

administrative action against Cashout Settling Defendants pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. These covenants shall take effect upon the Effective Date. These covenants extend only to Cashout Settling Defendants and do not extend to any other person.

71. Covenants for Sales-Only Cashout Settling Defendants by United States.

Except as provided in ¶ 77 (General Reservations of Rights), the United States covenants not to sue or to take administrative action against Sales-Only Cashout Settling Defendants pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. These covenants shall take effect upon the Effective Date. These covenants extend only to Sales-Only Cashout Settling Defendants and do not extend to any other person.

72. Covenants for Cashout Settling Federal Agencies.

Except as provided in ¶¶ 74, 75 (United States' Pre- and Post-Certification Reservations), and 77 (General Reservations of Rights), EPA covenants not to take administrative action against Cashout Settling Federal Agencies pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. These covenants shall take effect upon the Effective Date. These covenants extend only to Cashout Settling Federal Agencies and do not extend to any other person.

73. Covenants for Sales-Only Cashout Settling Federal Agency.

Except as provided in ¶ 77 (General Reservations of Rights), EPA covenants not to take administrative action against Sales-Only Cashout Settling Federal Agency pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. These covenants shall take effect upon the Effective Date. These covenants extend only to Sales-Only Cashout Settling Federal Agency and do not extend to any other person.

74. United States' Pre-Certification Reservations. Notwithstanding any other provision of this CD, the United States reserves, and this CD is without prejudice to, the right to institute proceedings in this action or in a new action, and/or to issue an administrative order, seeking to compel PSDs and Cashout Settling Defendants, and EPA reserves the right to issue an administrative order seeking to compel Cashout Settling Federal Agencies, to perform further response actions relating to the Site and/or to pay the United States for additional costs of response if, (a) prior to Certification of RA Completion, (1) conditions at the Site, previously unknown to EPA, are discovered, or (2) information, previously unknown to EPA, is received, in whole or in part, and (b) EPA determines that these previously unknown conditions or information together with other relevant information indicates that the RA is not protective of human health or the environment.

75. United States' Post-Certification Reservations. Notwithstanding any other provision of this CD, the United States reserves, and this CD is without prejudice to, the right to institute proceedings in this action or in a new action, and/or to issue an administrative order, seeking to compel PSDs and Cashout Settling Defendants, and EPA reserves the right to issue an administrative order seeking to compel Cashout Settling Federal Agencies, to perform further response actions relating to the Site and/or to pay the United States for additional costs of response if, (a) subsequent to Certification of RA Completion, (1) conditions at the Site, previously unknown to EPA, are discovered, or (2) information, previously unknown to EPA, is received, in whole or in part, and (b) EPA determines that these previously unknown conditions

or this information together with other relevant information indicate that the RA is not protective of human health or the environment.

76. For purposes of ¶ 74 (United States' Pre-Certification Reservations), the information and the conditions known to EPA will include only that information and those conditions known to EPA as of November 24, 2015, the date that certain UAO Parties submitted a report entitled "Annual Status Update, November 2015, Ward Transformer OU1 Superfund Site, Raleigh, North Carolina" to EPA. For purposes of ¶ 75 (United States' Post-Certification Reservations), the information and the conditions known to EPA shall include only that information and those conditions known to EPA as of the date of Certification of RA Completion and set forth in the OU1 ROD, the administrative record supporting the OU1 ROD, the post-OU1 ROD administrative record, or in any information received by EPA pursuant to the requirements of this CD prior to Certification of RA Completion.

77. General Reservations of Rights.

a. **Reservations of Rights Against All SDs and SFAs.** The United States reserves, and this CD is without prejudice to, all rights against SDs, and EPA and the federal natural resource trustees reserve, and this CD is without prejudice to, all rights against SFAs, with respect to all matters not expressly included within Plaintiff's covenants. Notwithstanding any other provision of this CD, the United States reserves all rights against SDs, and EPA and the federal natural resource trustees reserve all rights against SFAs, with respect to:

(1) liability for failure by SDs or SFAs to meet a requirement of this CD applicable to them;

(2) liability arising from the past, present, or future disposal, release, or threat of release of Waste Material outside of the Site;

(3) liability based on the ownership of the Site by SDs or SFAs when such ownership commences after signature of this CD by SDs or SFAs;

(4) liability based on the operation of the Site by SDs when such operation commences after signature of this CD by SDs and does not arise solely from PSDs' performance of the Work and liability based on the operation of the Site by SFAs when such operation commences after signature of this CD by SFAs;

(5) liability based on SDs' transportation, treatment, storage, or disposal, or arrangement for transportation, treatment, storage, or disposal of Waste Material at or in connection with the Site, other than as provided in the OU1 ROD, the Work, or otherwise ordered by EPA, after signature of this CD by SDs;

(6) liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments; and

(7) criminal liability.

b. **Additional Reservation of Rights Against PSDs.** Notwithstanding any other provision of this CD, the United States reserves all rights against PSDs with respect to

liability for violations of federal or state law that occur during or after implementation of the Work.

c. **Additional Reservations of Rights Against OU2 RI/FS AOC Parties.**

Notwithstanding any other provision of this CD, the United States reserves all rights against Consol, Duke, and PCS, and EPA reserves all rights against SFAs, with respect to the payment of response costs pursuant to Section XVIII of the OU2 RI/FS AOC.

78. **Work Takeover.**

a. In the event EPA determines that PSDs: (1) have ceased implementation of any portion of the Work; (2) are seriously or repeatedly deficient or late in their performance of the Work; or (3) are implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice (“Work Takeover Notice”) to PSDs. Any Work Takeover Notice issued by EPA will specify the grounds upon which such notice was issued and will provide PSDs a period of 10 days within which to remedy the circumstances giving rise to EPA’s issuance of such notice.

b. If, after expiration of the 10-day notice period specified in ¶ 78.a, PSDs have not remedied to EPA’s satisfaction the circumstances giving rise to EPA’s issuance of the relevant Work Takeover Notice, EPA may at any time thereafter assume the performance of all or any portion(s) of the Work as EPA deems necessary (“Work Takeover”). EPA will notify PSDs in writing (which writing may be electronic) if EPA determines that implementation of a Work Takeover is warranted under this ¶ 78.b. Funding of Work Takeover costs is addressed under ¶ 29 (Access to Financial Assurance).

c. PSDs may invoke the procedures set forth in ¶ 54 (Record Review), to dispute EPA’s implementation of a Work Takeover under ¶ 78.b. However, notwithstanding PSDs’ invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion commence and continue a Work Takeover under ¶ 78.b until the earlier of (1) the date that PSDs remedy, to EPA’s satisfaction, the circumstances giving rise to EPA’s issuance of the relevant Work Takeover Notice, or (2) the date that a final decision is rendered in accordance with ¶ 54 (Record Review) requiring EPA to terminate such Work Takeover.

79. Notwithstanding any other provision of this CD, the United States retains all authority and reserves all rights to take any and all response actions authorized by law.

XVII. COVENANTS BY SDs AND SFAs

80. **Covenants by SDs.** Subject to the reservations in ¶ 83, SDs covenant not to sue and agree not to assert any claims or causes of action against the United States with respect to the Site, and this CD, including, but not limited to:

a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund through CERCLA §§ 106(b)(2), 107, 111, 112 or 113, or any other provision of law;

b. any claims under CERCLA §§ 107 or 113, RCRA Section 7002(a), 42 U.S.C. § 6972(a), or state law regarding the Site and this CD; or

c. any claims arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the North Carolina Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, or at common law.

d. any direct or indirect claim for disbursement from the Ward Transformer Special Account or Ward Transformer Disbursement Special Account, except as provided in Section XI (Disbursement of Special Account Funds).

81. **Covenant by SFAs.** SFAs agree not to assert any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund through CERCLA §§ 106(b)(2), 107, 111, 112, or 113, or any other provision of law with respect to the Site and this CD. This covenant does not preclude demand for reimbursement from the Superfund of costs incurred by an SFA in the performance of its duties (other than pursuant to this CD) as lead or support agency under the NCP.

82. Except as provided in ¶¶ 85 (Waiver of Claims by SDs) and 92 (Res Judicata and Other Defenses), the covenants in this Section shall not apply if the United States brings a cause of action or issues an order pursuant to any of the reservations in Section XVI (Covenants by Plaintiff), other than in ¶¶ 77.a(1) (claims for failure to meet a requirement of the CD), 77.a(7) (criminal liability), and 77.b (violations of federal/state law during or after implementation of the Work), but only to the extent that SDs' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

83. SDs reserve, and this CD is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, and brought pursuant to any statute other than CERCLA or RCRA and for which the waiver of sovereign immunity is found in a statute other than CERCLA or RCRA, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States, as that term is defined in 28 U.S.C. § 2671, while acting within the scope of his or her office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, the foregoing shall not include any claim based on EPA's selection of response actions, or the oversight or approval of PSDs' deliverables or activities. SDs also reserve, and this CD is without prejudice to, contribution claims against SFAs in the event any claim is asserted by the United States against SDs pursuant to any of the reservations in Section XVI (Covenants by Plaintiff) other than in ¶¶ 77.a(1) (claims for failure to meet a requirement of the CD), 77.a(7) (criminal liability), and 77.b (violations of federal/state law during or after implementation of the Work), but only to the extent that SDs' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

84. Nothing in this CD shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

85. Waiver of Claims by SDs.

a. SDs agree not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that they may have for the “matters addressed” in this CD, as defined in ¶ 87, against each other or any other person who is a potentially responsible party under CERCLA at the Site, with the exception of Sales-Only Cashout Settling Defendants. With respect to Sales-Only Cashout Settling Defendants, SDs agree not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that they may have for response costs relating to the Site against Sales-Only Cashout Settling Defendants. The waivers in this Paragraph shall not apply with respect to any defense, claim, or cause of action that an SD may have against any person if such person asserts a claim or cause of action relating to the Site against such SD.

b. If the total amount of response costs incurred by the Trust to implement the Work required under this Consent Decree exceeds \$5,000,000, the waiver in ¶ 85.a also shall not apply to claims by the Trust for that portion of the response costs incurred by the Trust to implement the Work that are in excess of \$5,000,000 against any person who is not an SD or who has not entered into a settlement that resolves its CERCLA liability to the United States in connection with the Site.

c. **De Micromis Waiver.** Notwithstanding ¶ 85.b, even if the total amount of response costs incurred by the Trust to implement the Work required under this Consent Decree exceeds \$5,000,000, SDs agree not to assert any claims and waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that they may have for all matters relating to the Site against any person where the person’s liability to SDs with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials.

d. **Exceptions to Waiver.** The waiver under ¶ 85.c shall not apply to any claim or cause of action against any person otherwise covered by such waiver if EPA determines that: (i) the materials containing hazardous substances contributed to the Site by such person contributed significantly or could contribute significantly, either individually or in the aggregate, to the cost of the response action or natural resource restoration at the Site; or (ii) such person has failed to comply with any information request or administrative subpoena issued pursuant to Section 104(e) or 122(e)(3)(B) of CERCLA, 42 U.S.C. § 9604(e) or 9622(e)(3)(B), or Section 3007 of RCRA, 42 U.S.C. § 6927, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site; or if (iii) such person has been convicted of a criminal violation for the conduct to which the waiver would apply and that conviction has not been vitiated on appeal or otherwise.

XVIII. EFFECT OF SETTLEMENT; CONTRIBUTION

86. Except as provided in ¶ 85 (Waiver of Claims by SDs), nothing in this CD shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this CD. Except as provided in Section XVII (Covenants by SDs and SFAs), each of the Parties expressly reserves any and all rights (including, but not limited to, pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613), defenses, claims, demands, and causes of action that each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto. Nothing in this CD diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

87. The Parties agree, and by entering this CD this Court finds, that this CD constitutes a judicially-approved settlement pursuant to which each SD and each Settling Federal Agency has, as of the Effective Date, resolved liability to the United States within the meaning of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Section 113(f)(2) of CERCLA, or as may be otherwise provided by law, for the “matters addressed” in this CD. The “matters addressed” in this CD are all response actions taken or to be taken and all response costs incurred or to be incurred, at or in connection with the Site, by the United States or any other person, except for the State; provided, however, that if the United States exercises rights against SDs (or if EPA or the federal natural resource trustee asserts rights against SFAs) under the reservations in Section XVI (Covenants by Plaintiff), other than in ¶ 77.a(1) (claims for failure to meet a requirement of the CD), 77.a(7) (criminal liability), or 77.b (violations of federal/state law during or after implementation of the Work), the “matters addressed” in this CD will no longer include those response costs or response actions that are within the scope of the exercised reservation.

88. The Parties further agree, and by entering this CD this Court finds, that the complaint filed by the United States in this action is a civil action within the meaning of Section 113(f)(1) of CERCLA, 42 U.S.C. § 9613(f)(1), and that this CD constitutes a judicially-approved settlement pursuant to which each Settling Defendant and each SFA has, as of the Effective Date, resolved liability to the United States within the meaning of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B).

89. Each SD shall, with respect to any suit or claim brought by it for matters related to this CD, notify the United States in writing no later than 60 days prior to the initiation of such suit or claim.

90. Each SD shall, with respect to any suit or claim brought against it for matters related to this CD, notify in writing the United States within 10 days after service of the complaint on such SD. In addition, each SD shall notify the United States within 10 days after service or receipt of any Motion for Summary Judgment and within 10 days after receipt of any order from a court setting a case for trial.

91. Upon the Effective Date of this CD, the UAO is terminated as to the UAO Parties.

92. **Res Judicata and Other Defenses.** In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, recovery of response costs, or other appropriate relief relating to the Site, SDs shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenants not to sue set forth in Section XVI (Covenants by Plaintiff).

XIX. ACCESS TO INFORMATION

93. PSDs shall provide to EPA, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within PSDs' possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this CD, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Work. PSDs shall also make available to EPA for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

94. Privileged and Protected Claims.

a. PSDs may assert that all or part of a Record requested by Plaintiff is privileged or protected as provided under federal law, in lieu of providing the Record, provided PSDs comply with ¶ 94.b, and except as provided in ¶ 94.c.

b. If PSDs assert a claim of privilege or protection, they shall provide Plaintiff with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, PSDs shall provide the Record to Plaintiff in redacted form to mask the privileged or protected portion only. PSDs shall retain all Records that they claim to be privileged or protected until Plaintiff has had a reasonable opportunity to dispute the privilege or protection claim and any such dispute has been resolved in the PSDs' favor.

c. PSDs may make no claim of privilege or protection regarding: (1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that PSDs are required to create or generate pursuant to this CD.

95. **Business Confidential Claims.** PSDs may assert that all or part of a Record provided to Plaintiff under this Section or Section XX (Retention of Records) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). PSDs shall segregate and clearly identify all Records or parts thereof submitted under this CD for which PSDs assert business confidentiality claims. Records submitted to EPA determined to be confidential by EPA will be afforded the

protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA, or if EPA has notified PSDs that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to PSDs.

96. If relevant to the proceeding, the Parties agree that validated sampling or monitoring data generated in accordance with the SOW and reviewed and approved by EPA shall be admissible as evidence, without objection, in any proceeding under this CD.

97. Notwithstanding any provision of this CD, Plaintiff retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XX. RETENTION OF RECORDS

98. Until 10 years after EPA's Certification of Work Completion under Section V, Task II, ¶ D.1 (Remedial Action Report) of the SOW, each PSD shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to its liability under CERCLA with respect to the Site, provided, however, that SDs who are potentially liable as owners or operators of the Site must retain, in addition, all Records that relate to the liability of any other person under CERCLA with respect to the Site. Each PSD must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, provided, however, that each PSD (and its contractors and agents) must retain, in addition, copies of all data generated during the performance of the Work and not contained in the aforementioned Records required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

99. The United States acknowledges that each SFA (a) is subject to all applicable federal record retention laws, regulations, and policies; and (b) has certified that it has fully complied with any and all EPA and State requests for information regarding the Site pursuant to Sections 104(e) and 122(e)(3)(B) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e)(3)(B), and Section 3007 of RCRA, 42 U.S.C. § 6927, and state law.

100. At the conclusion of this record retention period, PSDs shall notify the United States at least 90 days prior to the destruction of any such Records, and, upon request by the United States, and except as provided in ¶ 94 (Privileged and Protected Claims), they shall deliver any such Records to EPA.

101. Each SD certifies individually that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by the United States or the State and that it has fully complied with any and all EPA and State requests for information regarding the Site pursuant to Sections 104(e) and 122(e)(3)(B) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e)(3)(B), and Section 3007 of RCRA, 42 U.S.C. § 6927, and state law.

XXI. NOTICES AND SUBMISSIONS

102. All approvals, consents, deliverables, modifications, notices, notifications, objections, proposals, reports, and requests specified in this CD must be in writing unless otherwise specified. Whenever, under this CD, notice is required to be given, or a report or other document is required to be sent, by one Party to another, it must be directed to the person(s) specified below at the addresses specified below. Any Party may change the person and/or address applicable to it by providing notice of such change to all Parties. All notices under this Section are effective upon receipt, unless otherwise specified. Notices required to be sent to EPA, and not to the United States, should not be sent to the DOJ. Except as otherwise provided, notice to a Party by email (if that option is provided below) or by regular mail in accordance with this Section satisfies any notice requirement of the CD regarding such Party.

As to the United States:

EES Case Management Unit
U.S. Department of Justice
Environment and Natural Resources Division
P.O. Box 7611
Washington, D.C. 20044-7611
eescdcopy.enrd@usdoj.gov
Re: DJ # 90-11-2-07152/2

and:

Chief
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Defense Section
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-11-6-17915/1

As to EPA:

Director, Superfund Division
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street, Atlanta, GA 30303
hill.franklin@epa.gov

and:

Hilary Thornton
EPA Project Coordinator
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street, Atlanta, GA 30303
thornton.hilary@epa.gov
404-562-8809

As to the Program Analyst:

Paula Painter
Program Analyst
61 Forsyth Street, Atlanta, GA 30303
painter.paula@epa.gov

As to EPA Cincinnati Finance Center:

EPA Cincinnati Finance Center
26 W. Martin Luther King Drive
Cincinnati, OH 45268
cinwd_acctsreceivable@epa.gov

As to PSDs:

Brett Berra PE, RSM
AECOM
1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560
Brett.berra@aecom.com
(919) 461-1290

As to Carr & Duff, Inc.:

Edward J. Duff
Carr & Duff, Inc.
2100 Byberry Road
Huntingdon Valley, PA 19006
(215) 672-4200

and:

Mason Avrigian, Jr., Esquire
Jeffrey P. Wallack, Esquire
Wisler Pearlstine, LLP
Blue Bell Executive Campus
460 Norristown Road
Suite 110
Blue Bell, PA 19422-2323
mavrigian@wispearl.com
jwallack@wispearl.com
(610) 825-8400

XXII. RETENTION OF JURISDICTION

103. This Court retains jurisdiction over both the subject matter of this CD and SDs for the duration of the performance of the terms and provisions of this CD for the purpose of enabling any of the Parties to apply to the Court at any time for such further order, direction, and relief as may be necessary or appropriate for the construction or modification of this CD, or to effectuate or enforce compliance with its terms, or to resolve disputes in accordance with Section XIV (Dispute Resolution).

XXIII. APPENDICES

104. The following appendices are attached to and incorporated into this CD:

“Appendix A” is the list of Sales-Only Cashout Settling Defendants, and reflects the amount each shall pay to the Trust pursuant to ¶ 32.a.

“Appendix B” is the list of Cashout Settling Defendants, and reflects the amount each shall pay to the Trust pursuant to ¶ 32.a.

“Appendix C” is the list of Settling Repair Defendants, and reflects the initial amount each shall pay to the Trust pursuant to ¶ 32.a, and the percentage shares of any future assessments issued by the Trust pursuant to ¶ 32.b.

“Appendix D” is the list of UAO Parties.

“Appendix E” is the map of the Site.

“Appendix F” is the OU1 ROD.

“Appendix G” is the SOW.

XXIV. MODIFICATION

105. Except as provided in ¶ 13 (Modification of SOW or Related Deliverables), material modifications to this CD, including the SOW, shall be in writing, signed by the United States and SDs, and shall be effective upon approval by the Court. Except as provided in ¶ 13, non-material modifications to this CD, including the SOW, shall be in writing and shall be effective when signed by duly authorized representatives of the United States and SDs. A modification to the SOW shall be considered material if it implements an OU1 ROD amendment that fundamentally alters the basic features of the selected remedy within the meaning of 40 C.F.R. § 300.435(c)(2)(ii). Before providing its approval to any modification to the SOW, the United States will provide the State with a reasonable opportunity to review and comment on the proposed modification.

106. Any modification that does not affect the obligations of or the protections afforded to SDs that are not PSDs may be executed without the signatures of such SDs.

107. Nothing in this CD shall be deemed to alter the Court’s power to enforce, supervise, or approve modifications to this CD.

XXV. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

108. This CD shall be lodged with the Court for at least 30 days for public notice and comment in accordance with Section 122(d)(2) of CERCLA, 42 U.S.C. § 9622(d)(2), and 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the CD disclose facts or considerations that indicate that the CD is inappropriate, improper, or inadequate. SDs consent to the entry of this CD without further notice.

109. If for any reason the Court should decline to approve this CD in the form presented, this agreement is voidable at the sole discretion of any Party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

XXVI. SIGNATORIES/SERVICE

110. Each undersigned representative of an SD to this CD and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this CD and to execute and legally bind such Party to this document.

111. Each SD agrees not to oppose entry of this CD by this Court or to challenge any provision of this CD unless the United States has notified SDs in writing that it no longer supports entry of the CD.

112. Each SD shall identify, on the attached signature page, the name, address, and telephone number of an agent or counsel who is authorized to accept service of process by mail or email on behalf of that Party with respect to all matters arising under or relating to this CD. SDs agree to accept service in that manner and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including, but not limited to, service of a summons. SDs need not file an answer to the complaint in this action unless or until the Court expressly declines to enter this CD.

XXVII. FINAL JUDGMENT

113. This CD and its appendices constitute the final, complete, and exclusive agreement and understanding among the Parties regarding the settlement embodied in the CD. The Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this CD.

114. Upon entry of this CD by the Court, this CD shall constitute a final judgment between and among the United States and SDs. The Court enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

SO ORDERED THIS 22ND DAY OF NOVEMBER, 2016.


A handwritten signature in black ink, reading "Xavier W. Eloragan". The signature is written in a cursive, flowing style. Below the signature is a horizontal line.


United States District Judge

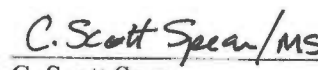
Signature Page for CD regarding the Ward Transformer Superfund Site

9/12/16
Dated

FOR THE UNITED STATES OF AMERICA:



John C. Cruden
Assistant Attorney General
U.S. Department of Justice
Environment and Natural Resources Division
Washington, D.C. 20530


Mark Sabath
Senior Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Enforcement Section
P.O. Box 7611
Washington, D.C. 20044-7611


C. Scott Spear
Trial Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Defense Section
P.O. Box 7611
Washington, D.C. 20044-7611

JOHN STUART BRUCE
Acting United States Attorney

BY:


G. Norman Acker, III
Assistant United States Attorney
Chief, Civil Division
310 New Bern Avenue
Suite 800 Federal Building
Raleigh, NC 27601-1461

Signature Page for CD regarding the Ward Transformer Superfund Site

8/29/16
Dated



Franklin E. Hill
Director, Superfund Division
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street SW
Atlanta, GA 30303




C. Jade Rutland
Associate Regional Counsel
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street SW
Atlanta, GA 30303

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR North Georgia Electric Membership Corporation
[Print Name of Party]

8/1/16
Date


Name (print): KATHRYN D. WEST
Title: President/CEO
Address: P.O. Box 1407 Dalton, GA 30722-1407

Agent Authorized to Accept Service
on behalf of Above-signed Party:

Name: Henry C. Tharpe, Jr.
Title: Outside General Counsel
Company: Sponcier & Tharpe, LLC
Address: 225 W. King Street, P.O. Box 398
Dalton, Georgia 30722-0398
Phone Number: 706-278-5211
Email: htharpe@daltongalaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR 3M Company :
[Print name of Settling Defendant]

8/4/16
Dated

J. R. Kotsmith
Name (print): James R. Kotsmith
Title: Manager, 3M Corp. Env. Programs
Address: 3M Center, Bldg. 224-5W-17
St. Paul, MN 55024

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Donald J. Camerson II
Title: ATTORNEY
Company: Bressler Amery & Ross, P.C.
Address: 325 Columbia Turnpike
Florence Park, N.J. 07932
Phone: 973-660-4433
email: djcamerson@bressler.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR  :
[Print name of Settling Defendant]

8/16/16
Dated

Jay A. Porter
Name (print):
Title: CEO, Adams-Columbia Electric Cooperative
Address: 401 East Lake Street POB 70
Friendship WI 53934

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Aerojet Rocketdyne Holdings, Inc.,
formerly named GenCorp Inc.
[Print name of Settling Defendant]

8/11/16

Dated

Kathleen E. Redd
Name: Kathleen E. Redd
Title: Vice President, Chief
Financial Officer and
Assistant Secretary
Address: P.O. Box 13222
Sacramento, CA 95813


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): William E. Hvidsten
Title: Senior Counsel, Environmental
Company: Aerojet Rocketdyne Holdings, Inc.,
formerly named GenCorp Inc.
Address: 2001 Aerojet Road
Rancho Cordova, CA 95742
Phone: 916-351-8524
email: william.hvidsten@Rocket.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Air Products and Chemicals, Inc. :
[Print name of Settling Defendant]

8/2/16
Dated


Name (print): Todd Solodar
Title: Senior EH&S Counsel
Address: 7201 Hamilton Boulevard
Allentown, PA 18195

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Todd Solodar
Title: Senior EH&S Counsel
Company: Air Products and Chemicals, Inc.
Address: 7201 Hamilton Boulevard
Allentown, PA 18195
Phone: (610)481-2558
email: solodate@airproducts.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Akers National Roll Company :
[Print name of Settling Defendant]



Dated _____

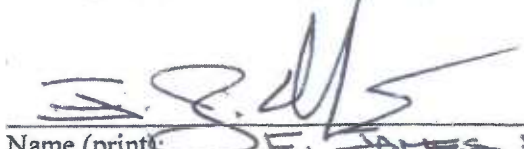
Name (print): Rose Hoover
Title: Vice President
Address: 726 Bell Avenue, Suite 301
Carnegie, PA 15106

Agent Authorized to Accept Service Name (print): Joshua D. Baker, Esq.
on Behalf of Above-signed Party: Title: Counsel
Company: Metz Lewis Brodman Must O'Keefe
Address: 535 Smithfield Street, Suite 800
Pittsburgh, PA 15222
Phone: (412) 918-1100
email: jbaker@metzlewis.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Alcan Primary Products Corporation
[Print name of Settling Defendant]

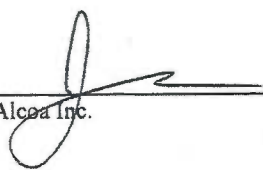
Aug 9/2016
Dated


Name (print): F. JAMES DICKSON
Title: PRESIDENT - ALCAN PRIMARY PRODUCTS CORPORATION
Address: 6150 PARKLAND BLVD.
CLEVELAND, OHIO 44124

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Hal J. Pos
Title: Counsel
Company: Parsons Behle & Lotimer
Address: 201 S. Main Street, Ste. 1800
Salt Lake City, UT 84111
Phone: 801-536-6725
email: hpos@parsonsbhle.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR


Alcoa Inc.

August 2, 2016

Dated

John Kenna

Name (print):

Title: Vice President, Tax

Address: 201 Isabella Street

Pittsburgh, PA 15212

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Franklin W. Boenning, Esq.

Title: Attorney

Company: Franklin W Boenning, LLC

Address: 1577 Grouse Lane

Mountainside, NJ 07092


Phone: 908-928-0301

email: fwblaw@comcast.net

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR AMERICAN BILTRITE INC.
[Print name of Settling Defendant]

7/25/16
Dated

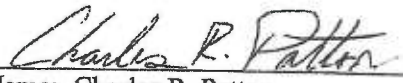

Name (print): HOWARD N. FEIST
Title: VP-FINANCE
Address: 57 RIVER ST. SUITE 302
WELLESLEY HILLS, MA 02481

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): HOWARD FEIST
Title: VP-FINANCE
Company: AMERICAN BILTRITE
Address: 57 RIVER ST. SUITE 302
WELLESLEY HILLS, MA 02481
Phone: 781-237-6655
email: SFEIST@AMBILT.COM

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Appalachian Power Company
[Print name of Settling Defendant]

August 10, 2016
Dated


Name: Charles R. Patton
Title: President & COO
Address: Laidley Tower Suite 800
500 Lee St. East
Charleston, WV 25301

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Charles R. Patton
Title: President & COO
Company: Appalachian Power Co.
Address: Laidley Tower Suite 800
500 Lee St., East
Charleston, WV 25301
Phone: (304)348-4152
email: crpatton@aep.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Arkema Inc.:

July 22, 2016
Dated


Name (print): William J. Hamel

Title: Sr. Vice President and General Counsel

Address: 900 First Avenue
King of Prussia, PA 19406

Agent Authorized to Accept Service Corporation Service Company
2595 Interstate Drive, Suite 103
Harrisburg, PA 17110

Phone: (717) 526-4330

E-mail: N/A

Signature Page for CD regarding the Ward Transformer Superfund Site

Board of Regents of University System of Georgia
on behalf of Augusta University
formerly known as Augusta State University

8-18-16

Dated


Anthony E. Wagner, M.Ed.
Exec VP for Administration & Finance/CBO

Agent Authorized to Accept Service	Name (print):	-	
on Behalf of Above-signed Party:	Title:	-	Name: Samuel C. Burch, Esq.
	Company:	-	Title: Vice Chancellor for Legal Affairs
	Address:	-	Board of Regents of the Univ. System of GA
		-	270 Washington Street SW
		-	Atlanta, GA 30334
	Phone:	-	Phone: 404-962-3255
	email:	-	EM: Sam.Burch@usg.edu

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR B AE Systems Norfolk Ship Repair Inc.:
[Print name of Settling Defendant]

August 3, 2016
Dated

Anne M. Donohue
Name (print): Anne M. Donohue
Title: Deputy Chief Counsel & Asst Secretary
Address: 750 West Berkley Avenue
Norfolk, VA 23523

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Anne M. Donohue
Title: Deputy Chief Counsel & Asst. Secretary
Company: BAE Systems Norfolk Ship Repair Inc.
Address: 750 West Berkley Avenue
Norfolk, VA 23523
Phone: 757.402.6280
email: anne.donohue@baesystems.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Barnes & Powell Electrical Co., Inc.:
[Print name of Settling Defendant]

9/13/2016
Dated

James L Powell
Name (print):
Title: Vice President
Address: Po Box 849, 308 S. Parker Street
Elm City, NC 27822


Agent Authorized to Accept Service Name (print): _____
on Behalf of Above-signed Party: Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Bassett Furniture Industries, Inc.:
[Print name of Settling Defendant]

8/19/16

Dated


Name (print): J. Michael Daniel
Title: Senior Vice President & Chief Financial Officer
Address: 3525 Fairystone Park Hwy
Bassett, VA 24055

Agent Authorized to Accept Service	Name (print):	<u>Todd S. Roessler</u>
on Behalf of Above-signed Party:	Title:	<u>Attorney</u>
	Company:	<u>Kilpatrick Townsend</u>
	Address:	<u>4208 Six Forks Rd, Ste 1400</u>
		<u>Raleigh, NC 27609</u>
	Phone:	<u>919-420-1726</u>
	email:	<u>troessler@kilpatricktownsend.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR BGE _____:
[Print name of Settling Defendant]

8/15/16
Dated

Carol Dodson
Name (print): Carol Dodson
Title: Vice President - Support Services
Address:

Agent Authorized to Accept Service Name (print): _____
on Behalf of Above-signed Party: Title: _____
Company: Corporate Creations Network
Address: 2 Wisconsin Circle, Suite 700
Cherry Chase MD 20815
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR BASF Corporation:
[Print name of Settling Defendant]

Dated

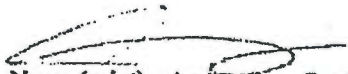
Linda Mirsky Brenneman
Name (print): Linda Mirsky Brenneman
Title: Associate General Counsel, Environmental
Address: 100 Park Avenue
Plorham Park, NJ 07932

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Karyllan Dodson Mack
Title: Environmental Counsel
Company: BASF Corp.
Address: 100 Park Ave
Plorham Park, NJ 07932
Phone: 973-245-7170
email: Karyllan.mack@basf.com

Signature Page for CD regarding the Ward Transformer Superfund Site

Bayer CropScience Inc
(Stauffer Management Company LLC as litigation agent for
FOR Bayer CropScience Inc
[Print name of Settling Defendant]

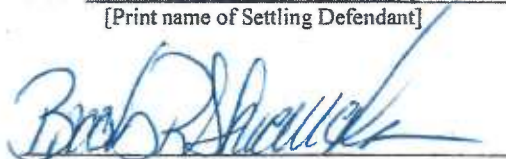
8/14/16
Dated


Name (print): Joe Yeager, Esq (McCarter & English LLP)
Title: Assistant Outside General Counsel to Stauffer Management Company
Address: 405 N. King Street, 8th Floor
Wilmington, DE 19801

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Charles N. Elmendorf
Title: Senior Director Environmental Remediation
Company: Stauffer Management Company LLC
Address: 1800 Concord Pike
Wilmington, DE 19850
Phone: (302) 885-7048
email: charles.elmendorf@astrazeneca.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Bedford Rural Electric Cooperative, Inc. :
[Print name of Settling Defendant]



8/16/2016

Dated


Name (print): Brooks R. Shoemaker
Title: General Manager
Address: P.O. Box 335
Bedford, PA 15522

Agent Authorized to Accept Service	Name (print):	<u>Joan W. Hartley</u>
on Behalf of Above-signed Party:	Title:	<u>Esquire</u>
	Company:	<u>Nexen Pruet, LLC</u>
	Address:	<u>1230 Main St, Suite 700</u>
		<u>Columbia, SC 29201</u>
	Phone:	<u>(803) 540-2129</u>
	email:	<u>jhartley@nexenpruet.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Town of Bedford, Virginia :
[Print name of Settling Defendant]

August 15, 2015
Dated


Name (print): Charles Kolakowski
Title: Town Manager
Address: 215 East Main Street
Bedford, VA 24523

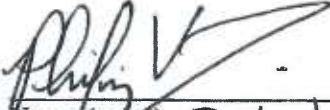
Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Charles Kolakowski
Title: Town Manager
Company: Town Of Bedford, Virginia
Address: 215 East Main Street
Bedford, VA 24523
Phone: (540) 587-6002
email: ckolakowski@bedfordva.gov

Reviewed by Town Attorney:
William W. Berry, IV
VA Bar No. : 09113
206 East Main Street
PO Box 526
Bedford, VA 24523
(540) 586-8133
Fax: (540) 586-8569
Email: wberry@bedfordva.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Town of Blackstone :
[Print name of Settling Defendant]

8/10/16
Dated


Name (print): Philip Vannoorbeeck
Title: Town Manager
Address: Town of Blackstone
100 W. Elm St. Blackstone, Va. 23824

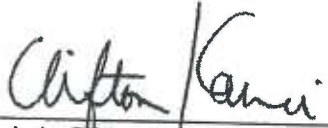
Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): William D. Coleburn
Title: Mayor
Company: Town of Blackstone
Address: 160 W. Elm St. Blackstone VA 23824
Phone: 434-292-3019 work
email: mayorbilly@courier-record.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Brazos Electric Power Cooperative, Inc. :
[Print name of Settling Defendant]

7/27/16
Dated


Name (print): Clifton Karnei
Title: Executive Vice President & General Manager
Address: 7616 Bagby Ave., Waco, TX 76712


Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Clifton Karnei
Title: Exec. Vice Pres. & General Manager
Company: Brazos Electric Power Cooperative, Inc.
Address: 7616 Bagby Ave., Waco, TX 76712
Phone: (254) 750-6500
email: ckarnei@brazoselectric.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Buist Electric :
[Print name of Settling Defendant]

8/2/16
Dated


Name (print): Brent Brinks
Title: Vice President
Address: 8650 Byron Center Ave
Byron Center, MI 49315

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Steve Longstreet
Title: President
Company: Buist Electric
Address: 8650 Byron Center Ave

Phone: 616 8781375
email: SLONGSTREET@BUISTELECTRIC.COM



Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Cape Hatteras Electric Membership Corporation
[Print name of Settling Defendant]

8/12/16
Dated

Susan E. Flythe
Name (print): Susan E. Flythe
Title: EVP & General Manager
Address: PO Box 9
Buxton, NC 27920

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Patrick A. Genzler
Title: Legal Counsel
Company: Vandeventer Black LLP
Address: 500 World Trade Center
Norfolk, VA 23510
Phone: 757-446-8631
email: pgenzler@vanblk.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Cargill, Inc. :
[Print name of Settling Defendant]

August 2, 2016
Dated


Anne Monine
Name (print): Anne Monine
Title: Corporate Environmental Lead
Address: 15407 McGinty Rd W
MS-56-1-9380
Wayzata, MN 55391

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Anne Monine
Title: Corporate Environmental Lead
Company: Cargill, Inc.
Address: 15407 McGinty Rd W
MS-56-1-9380
Phone: Wayzata, MN 55391
email: 952-742-2969
anne-monine@cargill.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Carlisle Construction Materials, LLC :
[Print name of Settling Defendant]
f/k/a Carlisle Syntec Incorporated

8/24/16
Dated

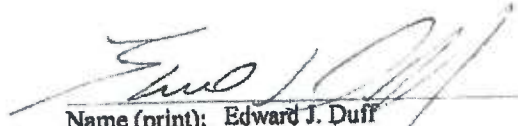

Name (print): John D. Waclawski
Title: VP + General Counsel
Address: 1285 Ritner Highway
Carlisle, PA 17013

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): John D. Waclawski
Title: VP and General Counsel
Company: Carlisle Construction Materials, LLC
Address: 1285 Ritner Highway
Carlisle, PA 17013
Phone: 717-245-7151
email: john.waclawski@carlislecm.com

Signature Page for CD regarding the Ward Transformer Superfund Site

Carr & Duff, Inc., for itself and on behalf of
FOR Ed Duff :
[Print name of Settling Defendant]

9/17/16
Dated


Name (print): Edward J. Duff
Title: Vice President
Address: 2100 Byberry Road
Huntingdon Valley, PA 19006

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	Mason Avrigian, Jr./Jeffrey P. Wallack
	Title:	Attorneys for Carr & Duff, Inc.
	Company:	Wisler Pearlstine, LLP
	Address:	460 Norristown Road, Suite 110
		Blue Bell, PA 19422
	Phone:	610-825-8400
email:	mavrigian@wispearl.com/jwallack@wispearl.com	

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Caterpillar Inc. :
[Print name of Settling Defendant]

AUGUST 8, 2016

Dated



Name (print): Rick Moore
Title: Facility Manager
Address: 27th and Pershing Road
Decatur, IL 62525

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Charles Anthony
Title: Environmental Attorney
Company: Caterpillar Inc.
Address: 100 NE Adams St.
Peoria, IL 61629
Phone: (309) 675-5257
email: anthony_charles_r@cat.com

Signature Page for CD regarding the Ward Transformer Superfund Site

**FOR CEMEX CONSTRUCTION MATERIALS
FLORIDA, LLC**

8/17/16

Dated

MEF

Name (print): Mike F. Egan

Title: EVP & GC

Address: 1501 Belvedere Road
West Palm Beach, FL 33406

Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): Corporate Creations

Title: Agent for Service

Company: Corporate Creations Network, Inc.

Address: 11380 Prosperity Farms Rd., #221E
Palm Beach Gardens, FL 33410

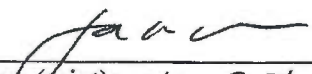
Phone: (561) 694-8107

email: contactus@corpcreations.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR C6X Energy LLC :
[Print name of Settling Defendant]

August 8, 2016
Dated


Name (print): John R. Thomas
Title: Assistant General Counsel
Address: 200 West Street
New York, NY 10282-2198

Agent Authorized to Accept Service	Name (print):	<u>Megan R. Brillault</u>
on Behalf of Above-signed Party:	Title:	<u>Attorney</u>
	Company:	<u>Beveridge & Diamond, P.C.</u>
	Address:	<u>477 Madison Avenue, 15th Floor</u>
		<u>New York, NY 10022</u>
	Phone:	<u>212-702-5414</u>
	email:	<u>mbrillault@bdlaw.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

Lloyd Ballard Mauldin FOR Chemical Products Corporation
[Print name of Settling Defendant]

7/25/2016
Dated

Lloyd Ballard Mauldin
Name (print):
Title: President
Address: P.O. Box 2470
Cartersville, GA 30120

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Lloyd Ballard Mauldin
Title: President & Registered Agent
Company: Chemical Products Corporation
Address: P.O. Box 2470
Cartersville, GA 30120
Phone: (770) 382-2144
email: B.Mauldin@CPCL.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Chevron Mining Inc. :
[Print name of Settling Defendant]

8/2/16
Dated

Robert R. John
Name (print): Robert R. John
Title: President
Address: 6001 Bollinger Canyon Road
San Ramon, CA 94583-2324

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Corporation Service Company (CSC)
Title:
Company:
Address: 2710 Gateway Oaks Dr. Suite 150 N
Sacramento, CA 95833
Phone: 1-800-222-2122
email: SOP@CSCglobal.com

Signature Page for CD regarding the Ward Transformer Superfund Site

CHRISTUS Health Northern Louisiana
FOR d/b/a CHRISTUS Schumpert :
[Print name of Settling Defendant]

8-16-16
Dated

Andy Navarro
Andy G. Navarro
Name (print):
Title: Vice President / Regional General Counsel
Address: 919 Hidden Ridge
Irving, TX 75038

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Nancy Le Gros
Title: Sr. V.P. / Chief Legal Counsel
Company: CHRISTUS Health
Address: 919 Hidden Ridge
Irving, TX 75038
Phone: (469) 282-2354
email: nancy.legros@christushealth.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Cleveland Electric Company
[Print name of Settling Defendant]

August 2016
Dated


Name (print): Ken Harbour
Title: Vice President
Address: 1281 Fulton Industrial Boulevard
Atlanta, Georgia 30336

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Herman L. Fussell</u>
	Title:	<u>Attorney</u>
	Company:	<u>Hudson Parrott Walker, LLC</u>
	Address:	<u>3575 Piedmont Rd. NE, Bldg 15, Ste. L100</u>
		<u>Atlanta, Georgia 30305</u>
	Phone:	<u>404.781.0565</u>
	email:	<u>hfussell@hpwlegal.com</u>

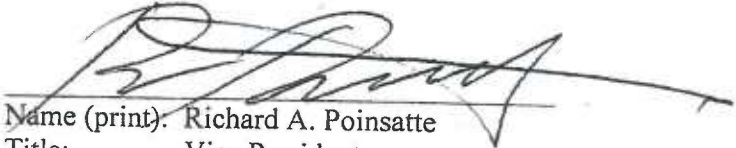
NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Cohen & Green Salvage Company, Inc.

1 August 2016

Dated


Name (print): Richard A. Poinsatte
Title: Vice President
Address: 7575 West Jefferson Blvd.
Fort Wayne, IN 46804

Agent Authorized to Accept Service
On Behalf of Above-signed Party:

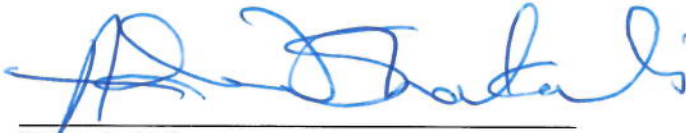
Name (print): David R. Steiner
Title: Attorney for Cohen & Green Salvage
Company, Inc.
Company: Barrett McNagny LLP
Address: 215 East Berry Street
Fort Wayne, IN 46802
Phone: (260) 423-8915
email: drs@barrettlaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Conopco Inc. f/k/a Unilever
[Print name of Settling Defendant]

8/30/2016

Dated



Name (print):

Andrew Shakalis

Title:

Associate General Counsel-

Address:

Environmental & Safety
as in-house counsel, acting
on behalf of Conopco, Inc.

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print):

Andrew Shakalis

Title:

Associate General Counsel

Company:

Conopco, Inc.

Address:

800 Sylvan Avenue, A-1024
Englewood Cliffs NJ 07634

Phone:

201.894.2763

email:


andrew.shakalis@unilever.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Consolidation Coal Company
[Print name of Settling Defendant]

8/2/16
Dated


Name (print): Jason D. Witt
Title: Secretary
Address: 46226 NATIONAL RD.
St. Clairsville, OH 43950

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Jason D. Witt
Title: Secretary
Company: Consolidation Coal Company
Address: 46226 National Rd.
St. Clairsville, Ohio 43950
Phone: 740-338-3352
email: jwitt@coalsource.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Continental Grain Company :
[Print name of Settling Defendant]



August 10, 2016

Dated

Name (print): Frank W. Baier
Title: Executive Vice President - Chief Financial Officer
Address: 767 Fifth Avenue, 15th Floor
New York NY 10153

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Michael R. Mayberry
Title: Senior Vice President - Legal
Company: Continental Grain Company
Address: 767 Fifth Avenue, 15th Fl.
New York NY 10153
Phone: 212-267-2878
email: michael.mayberry@conti.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR

COOPER TIRE & RUBBER COMPANY

7/27/2016
Dated


Name: Thomas N. Lause

Title: VP and Treasurer

Address: 701 Lima Avenue, Findlay, Ohio 45840

Approved as to Legal
Form JSW


Agent Authorized to Accept Service Name (print):
on Behalf of Above-signed Party:

Title: Amy McLaren
Company: CT Corporation
Address: 1300 E. 9th Street
Cleveland, Ohio 44114
Phone: 216-802-2121

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Corning Incorporated, formerly known as Corning Glass Works :
[Print name of Settling Defendant]

August 17, 2016
Dated

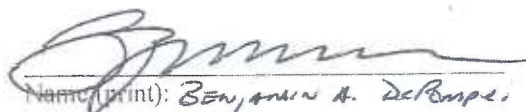

Name (print): Jack H. Cleland
Title: Senior Vice-President
Address: Corning Incorporated
One Riverfront Plaza
Corning, NY 14831

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Linda E. Jolly
Title: Vice President and Corporate Secretary
Company: Corning Incorporated
Address: One Riverfront Plaza
Corning, NY 14831
Phone: 607-974-7430
email: jollyl2@corning.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Dacco, Inc. _____;
[Print name of Settling Defendant]

8.16.16
Dated


Name (print): BENJAMIN A. DeRonde
Title: CEO, EVP
Address: 7350 Young Dr
Wickliffe, OH 44146

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Corporation Service Company
Title: Registered Agent
Company: _____
Address: 50 W. Broad St., Suite 1800
Columbus, OH 43215
Phone: 1-866-403-5272
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR DELAWARE ELECTRIC COOPERATIVE, INC.
[Print name of Settling Defendant]

8/8/2016

Dated

J. William Andrew

Name (print): J. WILLIAM ANDREW

Title: PRESIDENT & CEO

Address: PO BOX 600
GREENWOOD, DE 19950

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): BRUCE CAMPBELL

Title: MANAGER OF COLLECTIONS

Company: DELAWARE ELECTRIC COOPERATIVE INC

Address: PO BOX 600

GREENWOOD DE 19950

Phone: 302-349-3159

email: BCAMPBELL@DECOOP.COM

Signature Page for CD regarding the Ward Transformer Superfund Site

DONORAN Spring & Equipment Co. Inc.

FOR

[Signature]
[Print name of Settling Defendant]

8/16/16
Dated

JOHN CHAKMAKAS

Name (print):

Title: VP+TREAS

Address: 6 ENTERPRISE DR

LOWDOVERAY NH 03053

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Michael J. Quinn

Title: Attorney

Company: McLane Middleton

Address: 100 Arboretum Drive

Newington, NH 03801

Phone: (603) 436-2818

email: Mike.Quinn@McLane.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR City of Dover :
[Print name of Settling Defendant]

8/23/2016
Dated

William W. Pappas
Name (print) William W. Pappas
Title: Deputy City Solicitor
Address: 414 S. State Street
Dover, DE 19901


Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): Nicholas H. Rodriguez, Esq.
Title: City Solicitor
Company: _____
Address: 414 S. State Street
Dover, DE 19901
Phone: (302) 674-0140
email: nrodriguez@schmittrod.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Dravo Corp. :
[Print name of Settling Defendant]

August 11, 2016
Dated


Name (print): Kevin White
Title: Vice President and General Counsel
Address: Carmeuse Lime & Stone
11 Stanwix St., 21st Floor
Pittsburgh PA 15222

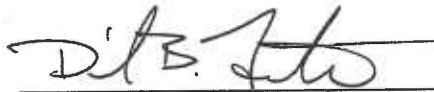
Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Joseph Frankenberg
Title: Environmental Counsel
Company: Carmeuse Lime & Stone
Address: 11 Stanwix St., 21st Floor
Pittsburgh PA 15222
Phone: 412.995.1054
email: joseph.frankenberg@carmeuseinc.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Duke Energy Progress, LLC:
[Print name of Settling Defendant]

8-10-2016

Dated



Name (print): David B. Fountain
Title: President, North Carolina
Address: 410 S. Wilmington Street
Raleigh, NC 27601

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

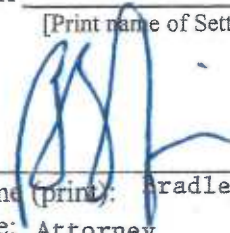
Name (print): Ariane S. Johnson, Esq.
Title: Associate General Counsel
Company: Duke Energy
Address: 1000 E. Main Street
Plainfield, IN 46168
Phone: (317) 838-1035
email: ariane.johnson@duke-energy.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Duquesne Light Company :
[Print name of Settling Defendant]

08/12/16

Dated


Name (print): Bradley S. Tupi
Title: Attorney
Address: 1500 One PPG Place
Pittsburgh, PA 15222

Agent Authorized to Accept Service	Name (print):	<u>Bradley S. Tupi</u>
on Behalf of Above-signed Party:	Title:	<u>Attorney</u>
	Company:	<u>Tucker Arensberg, P.C.</u>
	Address:	<u>1500 One PPG Place</u>
		<u>Pittsburgh, PA 15222</u>
	Phone:	<u>(412) 594-5545</u>
	email:	<u>btupi@tuckerlaw.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR East Central Regional Hospital
[Print name of Settling Defendant]

8/19/16
Dated

Paul M. Brock
Name (print): Paul Brock
Title: Regional Hospital Administrator
Address: 100 Myrtle Blvd.
Gracewood, GA 30812

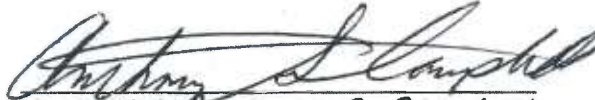
Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Graham L. Barron, Esq.
Title: Assistant Attorney General
Company: Georgia Department of Law
Address: 40 Capitol Square, SW
Atlanta, GA 30334-1300
Phone: (404) 656-7541
email: gbarron@law.ga.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR East Kentucky Power Cooperative
[Print name of Settling Defendant]

08-01-2016

Dated



Name (print): ANTHONY S. Campbell

Title: President & CEO

Address: P.O. Box 707

Winchester, KY 40392-0707

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print):

ANTHONY S. Campbell

Title:

President & CEO

Company:

East Kentucky Power Cooperative

Address:

P.O. Box 707

Winchester KY 40392-0707

Phone:

859-745-9314

email:

tony.campbell@ekpc.coop

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR East Penn Manufacturing Co.
[Print name of Settling Defendant]

1/25/16
Dated

Christina L. Weeber
Name (print):
Title: Senior VP-Finance/Secretary
Address: 102 Deka Road
Lyon Station, PA 19536

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Cooper Power Systems, LLC ;
[Print name of Settling Defendant]

9/7/16
Dated


Name (print): Heath B. Monesmith
Title: Senior Vice President and Deputy General Counsel
Address: Eaton
1000 Eaton Boulevard
Cleveland, OH 44122


Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Rita Palmer
Title: _____
Company: CT Corporation
Address: 1300 Superior Ave.
Cleveland, OH 44114
Phone: 216 802 2103
email: rita.palmer@WolterSkluwer.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR E. I. du Pont and Company :
[Print name of Settling Defendant]

Aug 9, 2016
Dated


Name (print): Michael J. Lukas
Title: Remediation Team Manager
Address:

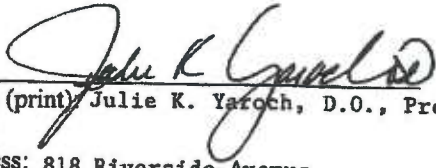
Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print): <u>PATRICIA MCGEE, Esq.</u>
	Title: <u>CORPORATE COUNSEL</u>
	Company: <u>E. I. du Pont de Nemours and Company</u>
	Address: <u>974 CENTRE ROAD</u>
	<u>WILMINGTON DE 19805</u>
	Phone: <u>302-986-8275</u>
	email: <u>PATRICIA.MCGEE@DUPONT.COM</u>

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Emma L. Bixby Medical Center dba
ProMedica Bixby Hospital :
[Print name of Settling Defendant]

7-28-16
Dated



Name (print): Julie K. Yatch, D.O., President
Title:
Address: 818 Riverside Avenue
Adrian, MI 49221

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Jeffrey C. Kuhn
Title: Chief Legal Officer/General Counsel
Company: ProMedica Health System
Address: 1801 Richards Road
Toledo, OH 43607
Phone: (419) 469-3622
email: jeff.kuhn@promedica.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Endicott Clay Products Company:
[Print name of Settling Defendant]

August 15, 2016
Dated

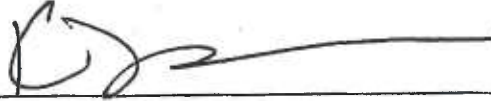

Name (print): Ryan L. Parker
Title: President & CEO
Address: P.O. Box 17
Fairbury, NE 68352

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Ryan L. Parker
Title: President & CEO
Company: Endicott Clay Products Company
Address: P.O. Box 17
Fairbury, NE 68352
Phone: 402-729-3315
email: rparker@endicott.com

Electing to be a Cashout Party. ^{7/28 8/15/16}

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Entergy Arkansas, Inc. f/k/a Arkansas Power and Light, Inc. :
[Print name of Settling Defendant]



8/12/16
Dated

Name (print): Kelly McQueen
Title: Assistant General Counsel
Address: 425 West Capitol Ave., Little
Rock, AR 72201

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Kelly McQueen
Title: Assistant General Counsel
Company: Entergy Services, Inc. (signing as Agent for EAI)
Address: 425 West Capitol Ave. Little Rock,
AR 72201
Phone: 501-377-5760
email: kmcque1@entergy.com

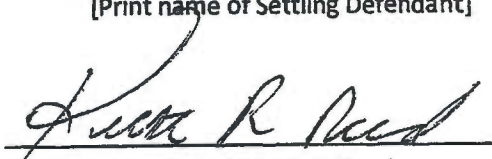
Signature Page for CD regarding the Ward Transformer Superfund Site

FOR ENVIRONMENTAL PROTECTION SERVICES, INC. :

[Print name of Settling Defendant]

August 19, 2016

Dated



Name (print): Keith R. Reed

Title: President

Address: 4 Industrial Park Dr.

Wheeling, WV, 26003

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Edward L. Kropp

Title: Counsel

Company: Steptoe & Johnson, PLLC

Address: P.O. Box 36425

Indianapolis, IN, 36426


Phone: (317) 946-9882

email: Skipp.Kropp@steptoe-johnson.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR ERACHEM COMILOG INC. :
[Print name of Settling Defendant]

Dated _____

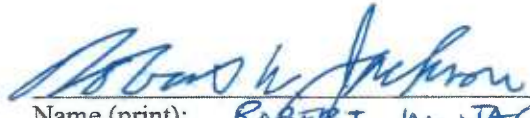

Name (print): Michael E. Manley
Title: CEO
Address: 610 Pittman Rd
Baltimore, MD 21226

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>John Lazzaretti</u>
	Title:	<u>Senior Associate</u>
	Company:	<u>Squire Patton Boggs (US) LLP</u>
	Address:	<u>4900 Key Tower 127 Public Square</u>
		<u>Cleveland, OH 44114</u>
	Phone:	<u>216.479.8350</u>
	email:	<u>john.lazzaretti@squirepb.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR EXXONMOBIL OIL CORPORATION
[Print name of Settling Defendant]

16 Aug 16
Dated


Name (print): ROBERT W. JACKMORE
Title: US/AMERICAS SOUTH
Address: COMMERCIAL MGR.
22777 SPRINGWOODS VILLAGE PARKWAY
52.2B.282, SPRING TX 77389

Agent Authorized to Accept Service Company
on Behalf of Above-signed Party: NAME (print): CORPORATION SERVICE COMPANY
Title: _____
Company: _____
Address: 327 MILLSBOROUGH STREET
RALEIGH, NC 27603-1725
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Fabri-Kal Corporation :
[Print name of Settling Defendant]

8/4/2016
Dated

Gary C. Galia
Name (print): Gary C. Galia
Title: EVP – Finance/CFO
Address: 600 Plastics Place,
Kalamazoo, Michigan 49001

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Firelands Electric Cooperative, Inc.
[Print name of Settling Defendant]

7/26/16

Dated



Name (print): Daniel McNaull
Title: President
Address: 1 Energy Place
New London, Ohio 44851

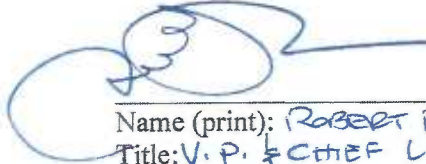
Agent Authorized to Accept Service
on behalf of Above-signed Party:

Name (print): April Bordas
Title: General Manager
Company: Firelands Electric Cooperative, Inc.
Address: 1 Energy Place
New London, Ohio 44851
Phone: 419/929-1571
Email: abordas@firelandsec.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR FLORIDA POWER & LIGHT COMPANY / NEXTERA
[Print name of Settling Defendant]

8/01/16
Dated



Name (print): ROBERT B. SANDLER
Title: V.P. & CHIEF LITIGATION COUNSEL
Address: 700 UNIVERSE BLVD.
JUNO BEACH, FL.
33408

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): ROBERT B. SANDLER
Title: V.P. & CHIEF LITIGATION COUNSEL
Company: FPL / NEXTERA ENERGY
Address: 700 UNIVERSE BLVD.
JUNO BEACH, FL. 33408
Phone: 561-691-7109
email: robert.b.sandler@nee.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR :

August 3, 2016

Name (print): Douglas L. Frame
Company: FluiDyne Engineering Corp.
dba Phoenix Solutions Co
Title: President
Address: 5480 Nathan Lane N,
Suite 110
Plymouth, MN 55442

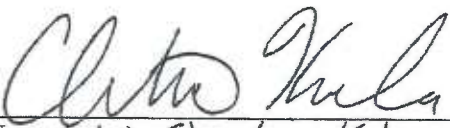
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Douglas L. Frame
Title: President
Company: FluiDyne Engineering Corp.
.dba Phoenix Solutions Co
Address: 5480 Nathan Lane N,
Suite 110,
Plymouth, MN 55442
Phone: 763-544-2721
email: dframe@phoenixsolutionsco.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR FMC Corporation :
[Print name of Settling Defendant]

8/3/16
Dated



Name (print): Christina Kaba
Title: Director, EHS Remediation & Governance
Address: FMC Corporation
2929 Walnut St.
Philadelphia, PA 19104

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): John F. Stillman
Title: Assistant General Counsel
Company: FMC Corporation
Address: 2929 Walnut St.
Philadelphia, PA 19104
Phone: (215) 299-6989
email: john.stillman@fmc.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Four County Electric Membership Corporation :
[Print name of Settling Defendant]

August 3, 2016
Dated


Name (print): Mitchell L. Keel
Title: CEO
Address: 1822 NC Hwy 53 W, Burgaw NC 28425

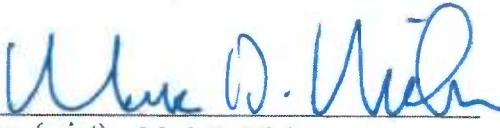
Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Mitchell L. Keel
Title: CEO
Company: Four County Electric Membership Corporation
Address: 1822 NC Hwy 53 W
Burgaw, NC 28425
Phone: (910) 259-1825
email: mkeel@fourcty.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Frontier Communications Corp. :
[Print name of Settling Defendant]

7/26/16

Dated


Name (print): Mark D. Nielsen
Title: EVP, General Counsel
Address: 401 Merritt 7, Norwalk, CT 06851

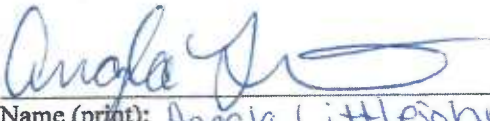
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): John S. Hahn
Title: Partner
Company: Mayer Brown LLP
Address: 1999 K Street N.W.
Washington D.C. 20006-1101
Phone: 202-263-3346
email: jhahn@mayerbrown.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Furman University :
[Print name of Settling Defendant]

8/12/16
Dated

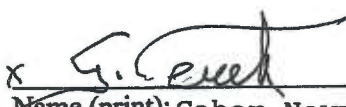

Name (print): Angela Littlejohn
Title: General Counsel
Address: 3300 Poinsett Hwy
Greenville, South Carolina

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR G&S Motor Equipment Co., INC. :
[Print name of Settling Defendant]

7/26/16
Dated


x 
Name (print): Gabor Newmark
Title: President
Address: 1800 Harrison Ave.
Kearny, NJ 07032

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	Jeffrey B. Wagenbach, Esq.
	Title:	
	Company:	Riker Danzig Scherer Hyland & Perretti LLP
	Address:	Headquarters Plaza, One Speedwell Ave.
		Morristown, New Jersey 07962-1981
	Phone:	973-451-8524
email:	jwagenbach@riker.com	

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR General Electric Co. :
[Print name of Settling Defendant]

5 Aug 2016
Dated



Name (print): Randall McAlister
Title: Exec. Mgr., Environmental Remediation
Address: 3135 Easton Tpk.
Fairfield CT 06628

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Kirk Macfarlane
Title: Executive Counsel
Company: General Electric Company
Address: 640 Freedom Business Center
King of Prussia, PA 19406
Phone: 610 992 7976
email: kirk.macfarlane@ge.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR General Extrusions, Inc. :
[Print name of Settling Defendant]

7/29/2016
Dated

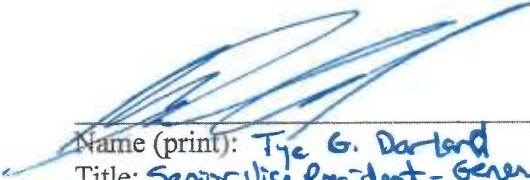

Name (print): Herbert F. Schuler, Jr.
Title: President
Address: PO Box 3488, Youngstown, OH 44513-3488

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Herbert F. Schuler, Jr.
Title: President
Company: General Extrusions, Inc.
Address: PO Box 3488
Youngstown, OH 44513-3488
Phone: 330-783-0270
email: hfschulerjr@genext.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Georgia Pacific LLC :
[Print name of Settling Defendant]

8/1/16
Dated


Name (print): Tye G. Darland
Title: Senior Vice President - General Counsel and Secretary
Address: 133 Peachtree Street, NE
Atlanta, GA 30303

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): John Bottini
Title: Senior Counsel
Company: Georgia-Pacific LLC
Address: 133 Peachtree St N.E.
Atlanta, Georgia 30303
Phone: 404-652-4803
email: john.bottini@gapac.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR GEP-TRC, LLC (f/k/a The Rouse Company, LLC),
a Delaware limited liability company:
[Print name of Settling Defendant]

8-11-16
Dated

Rosemary B. Feit
Name (print): Rosemary B. Feit
Title: Assistant Secretary
Address: c/o General Growth Properties
110 N. Wacker Drive
Chicago, IL 60606

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR GrafTech International Holdings Inc. f/k/a UCAR Carbon Company Inc. :
[Print name of Settling Defendant]



08/05/2016
Dated

LIONEL D BATT

Name (print):

Title: PRESIDENT ENVIRONMENTAL SOLUTIONS, GRAFTECH

Address: INTERNATIONAL
6100 OAK TREE BLVD
INDEPENDENCE, OHIO 44131

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print):

Title:

Company:

Address:

Phone:

email:

-

-

CT Corporation

1209 Orange Street

Wilmington, DE 19801

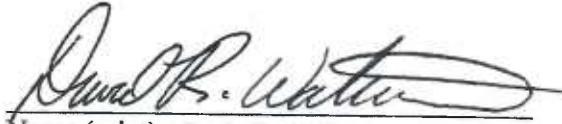
-

-

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Grand Haven Board of Light and Power :
[Print name of Settling Defendant]

August 8, 2016
Dated



Name (print): David R. Walters
Title: General Manager
Address: 1700 Eaton Drive
Grand Haven, MI 49417

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Timothy J. Lundgren
Title: Partner
Company: Varnum LLP
Address: 333 Bridge Street NW
Grand Rapids, MI 49504
Phone: (616) 336-6750
email: tjlundgren@varnumlaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR GREEN CIRCLE GROWERS, INC :
[Print name of Settling Defendant]

8-8-16
Dated


Tony Lucarell
Name (print): TONY LUCARELL
Title: CFO
Address: 51051 US HWY 20, OBERLIN, OH 44074

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Amanda M. Knapp, Esq.
Title: Attorney
Company: Roetzel & Andress LPA
Address: 1375 East Ninth Street
One Cleveland Center, 10th Fl, Cleveland OH
Phone: (216) 623-0150 44114
email: aknapp@ralaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Green Mountain Power, Inc. :
[Print name of Settling Defendant]

17 Aug 16
Dated



Name (print): Charlotte Ancel
Title: Vice President, General Counsel, Generation & Power Resources
Address: 1252 Post Road
Rutland, VT 05701

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Debra L. Bouffard</u>
	Title:	<u>Esquire</u>
	Company:	<u>Sheehey Furlong & Behm, P.C.</u>
	Address:	<u>30 Main Street, 6th Floor - PO Box 66</u>
		<u>Burlington, VT 05402-0066</u>
	Phone:	<u>(802) 864-9891</u>
	email:	<u>dbouffard@sheeheyvt.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Greenwood Mills Inc.
[Print name of Settling Defendant]

8-1-2016
Dated

William B. Watkins
Name (print): William B. Watkins
Title: Vice President
Address: P.O. Box 1546
Greenwood, S.C. 29648

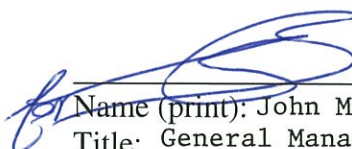
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Joan Wash Hartley
Title: Special Counsel
Company: Nelsen Pruet, LLC
Address: 1230 Main St. Ste 700
Columbia SC 29201
Phone: 803-540-2129
email: jhartley@nelsenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR GUAM POWER AUTHORITY :
[Print name of Settling Defendant]

8/1/16
Dated


Name (print): John M. Benavente, P.E.
Title: General Manager
Address: Guam Power Authority
P.O. Box 2977
Hagatna, Guam 96932-2977

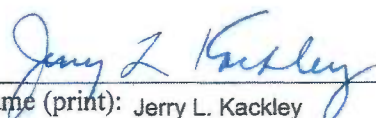
Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>D. Graham Botha, Esq.</u>
	Title:	<u>General Counsel</u>
	Company:	<u>Guam Power Authority</u>
	Address:	<u>P.O. Box 2977</u>
		<u>Hagatna, Guam 96932-2977</u>
	Phone:	<u>(671) 648-3203/3002</u>
	email:	<u>gbotha@gpagwa.com</u>

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Guernsey-Muskingum Electric Cooperative, Inc. :
[Print name of Settling Defendant]

8/18/2016
Dated


Name (print): Jerry L. Kackley
Title: General Manager/CEO
Address: 17 South Liberty Street
New Concord, OH 43762

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Trischa Snyder Chapman</u>
	Title:	<u>Legal Counsel</u>
	Company:	<u>BakerHostetler</u>
	Address:	<u>65 E. State Street, Suite 2100</u>
		<u>Columbus, OH 43215</u>
	Phone:	<u>614-462-2663</u>
	email:	<u>tchapman@bakerlaw.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR

Scott B. Haines
[Print name of Settling Defendant]
Scott B. Haines
for H+K Group, Inc.

8/8/16
Dated

Name (print):
Title: President
Address: 2052 Lucon Rd.
Skippack, PA 19474

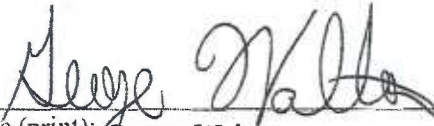
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Paul R. Ober, Esq.
Title: Attorney
Company: Paul Ober + Associates
Address: 234 N. 6th St.
Reading, PA 19601
Phone: 610-378-0121
email: paul@oberandassociates.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Hancock Wood Electric Cooperative, Inc. :
[Print name of Settling Defendant]

7/26/16
Dated


Name (print): George Walton
Title: President & CEO
Address: 1399 Business Park Drive South
North Baltimore, OH 45872

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): George Walton
Title: President & CEO
Company: Hancock Wood Electric Cooperative, Inc.
Address: 1399 Business Park Drive South
North Baltimore, OH 45872
Phone: 419-423-4841
email: george@hwe.coop

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Harsco Corporation :
[Print name of Settling Defendant]

2/16/16
Dated

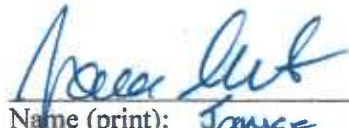
Sam Roman
Name (print): Samuel Romaninsky
Title: Assistant General Counsel, Global Litigation and
Address: Harsco Corporation Dispute Resolution
350 Poplar Church Road
Camp Hill, PA 17011

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Samuel Romaninsky
Title: Assistant General Counsel, G.L.D.R.
Company: Harsco Corporation
Address: 350 Poplar Church Road
Camp Hill, PA 17011
Phone: 717-730-1950
email: Sromaninsky@harsco.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Haynes International, Inc.
[Print name of Settling Defendant]

July 27, 2016
Dated


Name (print): Janice Grunst
Title: VP- General Counsel
Address: 1020 W. Park Ave.
Kokomo, IN 46904

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Janice Grunst
Title: VP- General Counsel
Company: Haynes International, Inc.
Address: 1020 W. Park Ave
Kokomo, IN 46904
Phone: (765) 456-6110
email: jgrunst@haynesintl.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR  Hercules Incorporated
[Print name of Settling Defendant]

08/19/16
Dated

Name (print): Robin E. Lampkin
Title: Senior Environmental Product Regulatory
Address: 5200 Blazer Parkway & Trade Group
Dublin, OH 43017 Counsel

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Robin E. Lampkin
Title: /
Company: Hercules Incorporated
Address: 5200 Blazer Parkway
Dublin, OH 43017
Phone: 614.790.3019
email: relampkin@hland.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The Hershey Company _____ :
[Print name of Settling Defendant]

August 18, 2016

Dated



Name (print): Kathleen S. Purcell

Title: Assistant Corporate Secretary

Address: 100 Crystal A Drive, Hershey, PA 17033

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Craig P. Wilson</u>
	Title:	<u>Partner</u>
	Company:	<u>K&L Gates LLP</u>
	Address:	<u>17 North Second Street, 18th Floor</u> <u>Harrisburg, Pennsylvania 17101-1507</u>
	Phone:	<u>(717) 231-4509</u>
	Email:	<u>craig.wilson@klgates.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The Hillshire Brands Company, f/k/a Sara Lee Corporation,
including all present and former subsidiaries and affiliates thereof :
[Print name of Settling Defendant]

8-1-2016
Dated



Name (print): Kevin J. Igli
Title: Senior Vice President
Address: 2200 Don Tyson Parkway
Springdale, AR 72762

Agent Authorized to Accept Service Name (print): Tyson Foods, Inc.
on Behalf of Above-signed Party: Title: N/A
Company: c/o CT Corporation
Address: 124 West Capitol Avenue, Suite 1900
Little Rock, AR 72201-3736
Phone: 202-572-3133
Email: N/A

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR HOLLADAY PROPERTY SERVICE MIDDLESEX, INC.
[Print name of Settling Defendant]

8/16/15
Dated

TIMOTHY A. BAKER T. A. B.
Name (print):
Title: SR. V.P. & PARTNER
Address: 227 SO. MAIN ST., SOUTH BEND, IN
46601


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): TIMOTHY A. BAKER
Title: SR. V.P. & PARTNER
Company: HOLLADAY PROPERTIES
Address: 227 SO. MAIN ST., SO. BEND, IN
46601
Phone: 574-217-4678
email: TBAKER@HOLLADAYPROPERTIES.COM

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Honeywell :
[Print name of Settling Defendant]

Dated _____


Name (print): John J. Morris
Title: Global Remediation Dir
Address: 115 Taber Rd
Morris Plains, NJ

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____

Company: _____

Address: _____

Phone: _____

email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR HUDSON LIGHT & POWER DEPT. :
[Print name of Settling Defendant]

8/10/16
Dated


Brian R Choquette
Name (print): BRIAN R. CHOQUETTE
Title: GENERAL MANAGER
Address: 49 FOREST AVE, HUDSON MA 01749

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Brian R. Choquette
Title: General Manager
Company: Hudson Light & Power Department
Address: 49 Forest Avenue
Hudson, MA 01749
Phone: 978-568-8736
email: bchoquette@hudsonlight.com

Signature Page for CD regarding the Ward Transformer Superfund Site

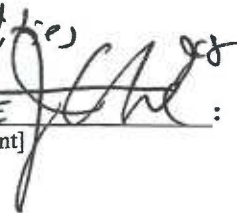
FOR Huntington Ingalls Incorporated :
[Print name of Settling Defendant]

8/17/16
Dated



Name (print):
Title: **Thomas Stiehle**
Address: **VP Business Management
& CFO**

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print):
Title: Registered Agent for Service of Process
Company: C T Corporation System
Address: 645 Lakeland East Drive, Suite 101
Flowood, Mississippi 39232
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

Huntsville Utilities
FOR JAY C. STOWE :
[Print name of Settling Defendant]

8.16.16
Dated



Name (print): JAY C STOWE
Title: PRESIDENT & CEO
Address: PO Box 2084
Huntsville, AL 35804

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Warne S. Heath
Title: Attorney
Company: Bradley Arant Boult Cummings LLP
Address: 200 Clinton Ave. W, Suite 900
Huntsville, AL 35801
Phone: 256-517-5100
email: wheath@bradley.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR IES Commercial, Inc. :
[Print name of Settling Defendant]

8/1/16
Dated


Name (print): Sarah Kemper
Title: VP, Asst. Secretary
Address: 5433 Westheimer, Ste 500
Houston, TX 77056

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Joan Wash Hartley
Title: Special Counsel
Company: Nexsen Pruet, LLC
Address: 1230 Main St., Ste. 700
Columbia Sc, 29201
Phone: 803-540-2129
email: jhartley@nexsenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Imerys Carbonates USA, Inc. :
[Print name of Settling Defendant]

8/4/2016
Dated


Cindy A. Hein
Name (print): Cindy A. Hein
Title: Treasurer
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Doug Arnold
Title: Partner
Company: Alston Bird LLP
Address: 1201 West Peachtree St.
Atlanta, GA 30309
Phone: (404) 881 7000
email: doug.arnold@alston.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Travis Fusal Minerals Greenville, Inc.
[Print name of Settling Defendant]

7/28/16
Dated


Name (print): Tim Newton
Title: C.O.O.
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR International Paper Co.:
[Print name of Settling Defendant]

8/11/16
Dated

Brian E. Heim
Name (print): Brian E. Heim
Title: Chief Counsel
Address: 6400 Poplar Ave
Memphis, TN 38197


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Brian E. Heim
Title: Chief Counsel
Company: International Paper
Address: 6400 Poplar Ave
Memphis, TN 38197
Phone: 901-419-3824
email: brian.heim@ipaper.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Intertape Polymer Group Inc. :
[Print name of Settling Defendant]

8/16/16
Dated



Name (print): Shawn Nelson
Title: Senior VP, Sales
Address: 100 Paramount Dr. Suite 300
Sarasota FL 34232

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Randi M. Booth
Title: Vice-President & General Counsel
Company: Intertape Polymer Group Inc.
Address: 100 Paramount Dr. Suite 300
Sarasota FL 34232
Phone: 941.739.7521
email: rbooth@itape.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR J.C. Blair Memorial Hospital
[Print name of Settling Defendant]

7/26/16
Dated


Name (print): Jason F. Hawker
Title: CEO
Address: 1229 Warm Springs Ave
Huntingdon, PA 16652

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Marlene Pierce
Title: V.P. of Quality Improvement
Company: J.C. Blair Memorial Hospital
Address: 1225 Warm Springs Ave.
Huntingdon, PA 16652
Phone: 814-643-8656
email: mpierce@jcblair.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Jessop Steel, LLC :
[Print name of Settling Defendant]

8-5-2016

Dated


Elliot S. Davis
Name (print): Elliot S. Davis
Title: Sr. Vice President
Address: 1000 Six PPG Place
Pittsburgh, PA 15222

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Matthew J. Engott
Title: Assistant General Counsel
Company: Jessop Steel, LLC
Address: 1000 Six PPG Place
Pittsburgh, PA 15222
Phone: 412-394-2910
email: matth.engott@atimetals.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Jet Electric Motor Company, Inc. :
[Print name of Settling Defendant]

8-15-16
Dated


Name (print): MICHAEL ZUROVSK
Title: PRESIDENT
Address: 688 SCHOOL ST.
PAWTUCKET, R.I

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Bret W. Jedele, Esq.</u>
	Title:	<u>Partner</u>
	Company:	<u>Chace Ruttenberg & Freedman, LLP</u>
	Address:	<u>One Park Row, Suite 300</u>
		<u>Providence, RI 02903</u>
	Phone:	<u>401-453-6400</u>
	email:	<u>bjedele@crfilp.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR John E. Kelly & Sons / Kelly Electric
[Print name of Settling Defendant]

8/16/16
Dated

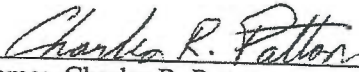
Stephen P. Kelly, Sr
Name (print): Stephen P. Kelly, Sr
Title: President
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Kingsport Power Company
[Print name of Settling Defendant]

August 10, 2016
Dated


Name: Charles R. Patton
Title: President & COO
Address: Laidley Tower Suite 800
500 Lee St. East
Charleston, WV 25301

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Charles R. Patton
Title: President & COO
Company: Appalachian Power Co.
Address: Laidley Tower Suite 800
500 Lee St., East
Charleston, WV 25301
Phone: (304)348-4152
email: crpatton@aep.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Koch Industries, Inc. :
[Print name of Settling Defendant]

8/4/16

Dated

Sheryl Corrigan



Name (print): Sheryl Corrigan

Title: Director, EH&S

Address: 4111 East 37th Street North
Wichita, KS 67220

Agent Authorized to Accept Service Name (print):
on Behalf of Above-signed Party: Title:

General Counsel

Company: Koch Companies Public Sector, LLC

Address: 4111 East 37th Street North
Wichita, KS 67220

Phone: (316) 828-5500

email:

Signature Page for CD regarding the Ward Transformer Superfund Site

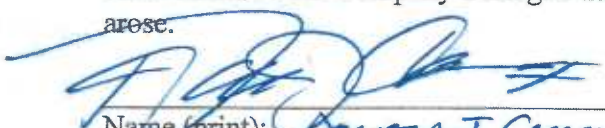
Kraft Heinz Foods Company, for itself, and on behalf of Mondelēz Global LLC but only to the extent that Mondelēz Global LLC's alleged liability with respect to the Site arose in connection with the same transactions from which Kraft Heinz Foods Company's alleged liability arose

FOR Kraft Heinz Foods Company*
[Print name of Settling Defendant]

* for itself, and on behalf of Mondelēz Global LLC but only to the extent that Mondelēz Global LLC's alleged liability with respect to the Site arose in connection with the same transactions from which Kraft Heinz Foods Company's alleged liability arose.

8/15/16
Dated


Agent Authorized to Accept Service
on Behalf of Above-signed Party:


Name (print): Donald J. Camerson
Title: Bressler Amery & Ross, P.C.
Address: ATTORNEYS FOR KRAFT HEINZ FOODS
325 Columbia Turnpike Company
Fleaham Park, NJ 07932
Name (print): Donald J. Camerson
Title: ATTORNEY
Address: Bressler Amery & Ross, P.C.
325 Columbia Turnpike
Fleaham Park, N.J.
07932
Phone: 973 660 4433
email: djcamerson@bressler.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR LaCrosse Footwear, Inc. :
[Print name of Settling Defendant]

8/1/16
Dated



Name (print): KOYA OBA
Title: PRESIDENT
Address: 17634 NE AIRPORT WAY
PORTLAND, OR 97230

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Latarge Mid-Atlantic, LLC:
[Print name of Settling Defendant]

8/16/16
Dated


Name (print): William G. Miller
Title: Vice President
Address: 6401 Golden Triangle Dr., Suite 400
Greenbelt, Maryland ~~20770~~ 20770

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): William G. Miller
Title: Vice President
Company: Latarge Mid-Atlantic LLC
Address: 6401 Golden Triangle Dr., Suite 400
Greenbelt, Maryland ~~20770~~ 20770
Phone: (301) 982-1497
email: bill.miller@latargeholcim.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR LEWIS Electric Supply Co. Inc
[Print name of Settling Defendant]

8/1/16
Dated

Patricia K. Lewis
Name (print):
Title: Secy Treas.
Address: 1306 2nd Street
Muscle Shoals AL 35661

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Patricia K. Lewis
Name (print):
Title:
Company:
Address:
Phone:
email:

~~resolute mgmt. com~~

~~lwhite@resolutiomgmt.com~~

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Town of Louisburg :
[Print name of Settling Defendant]

8/11/16
Dated

Karl T. Pernell
Name (print): Karl T. Pernell
Title: Mayor
Address: 110 W. Nash Street Louisburg, NC

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Jonathan Franklin
Title: Town Administrator
Company: Town of Louisburg
Address: 110 W. Nash Street
Louisburg, NC 27549
Phone: 919-497-1004
email: jfranklin@nc.rr.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Martin Marietta Materials, Inc.
[Print name of Settling Defendant]

8-15-16
Dated

Roselyn Bar
Name (print)
Title: EVP, General Counsel + Corporate Secretary
Address: 2710 Wycliff Road, Raleigh, NC 27607

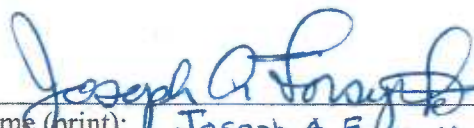
Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): _____
Title: _____
Company: C.T. Comp System
Address: 150 Fayetteville St. Box 1011
Raleigh NC 27601
Phone: 919-979-9480 (Service team)
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Mass. Electric Construction Co.:
[Print name of Settling Defendant]

8-11-16
Dated



Name (print): Joseph A. Forsythe
Title: Senior Vice President
Address: 400 Totten Pond Road, Suite 400
Waltham, MA. 02451

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>N/A</u>
	Title:	<u></u>
	Company:	<u>CT Corporation System</u>
	Address:	<u>155 Federal Street, Suite 700</u> <u>Boston, MA 02110</u>
	Phone:	<u></u>
	email:	<u></u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR MIDAMERICAN ENERGY COMPANY:

July 29, 2016
Dated


Jennifer McIvor
Vice President, Environmental Programs, Compliance
and Permitting
MidAmerican Energy Company
PO Box 657
Des Moines, IA 50309

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Paul Leighton
Vice President and Senior Trading Counsel
MidAmerican Energy Company
4299 Northwest Urbandale Dr.
Urbandale, IA 50322-7916
515-242-4099
PJLeighton@MidAmerican.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Mid-Valley Pipeline Company:
[Print name of Settling Defendant]

8/24/16
Dated



Name (print): D. R. Chalson
Title: Vice President
Address: 4041 Market St., Aston, PA 19014

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Kevin Dunleavy
Title: Chief Counsel
Company: Sunoco Inc
Address: 3801 West Chester Pike
Newtown Square, PA 19073
Phone: 215-927-6373
email: Kevin.dunleavy@sunoco.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

^{K/n/a} Jackson County Iron Company
FOR Mital Steel-Lancashire Coal, Inc.
[Print name of Settling Defendant]

8-15-14
Dated

Mark Jeske
Name (print): Mark Jeske
Title: Corp. Sec.
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Lisa S. Zebowitz
Title: Attorney
Company: Neal, Gerber & Eisenberg, LLP
Address: 2 N La Salle Street
Chicago IL 60602 - 3801
Phone: 312-269-8033
email: lzebovitz@ngelaw.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR 
CITY OF MONROE

August 18, 2016
Dated

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

EL Faison
Name (print): E.L. Faison
Title: City Manager
Address: Post Office Box 69
Monroe, North Carolina 28111

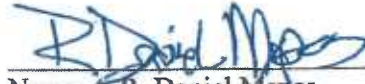
Name (print): E.L. Faison
Title: City Manager
Company: City of Monroe
Address: Post Office Box 69
Monroe, North Carolina 28111
Phone: (704) 282-4500
email: lfaison@monroenc.org

Signature Page for CD regarding the Ward Transformer Superfund Site.

FOR NATIONAL LIME AND STONE COMPANY
[Print name of Settling Defendant]

8-18-2016

Date



Name: R. Daniel Mapes
Title: Director of Administrative Services
Address: 551 Lake Cascades Parkway
Second Floor
P.O. Box 120
Findlay, OH 45840

Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): Thomas W. Palmer, Esq.
Title: Corporate Counsel
Company: Marshall & Melhorn, LLC
Address: Four SeaGate, 8th Floor
Toledo, OH 43604
Phone: (419) 249-7100
Email: palmer@marshall-melhorn.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR National Railroad Passenger Corporation
[Print name of Settling Defendant]

August 3, 2016
Dated



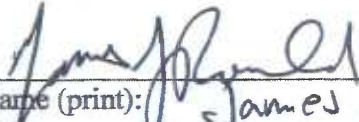
Name (print): William Herrmann
Title: VP & Managing Deputy General Counsel
Address: 60 Massachusetts Avenue, NE
Washington, DC 20002

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Eleanor D. Acheson, Executive VP,
Title: Chief Legal Officer, Gen. Coun. & Corp. Sec.
Company: National Railroad Passenger Corporation
Address: 60 Massachusetts Avenue, NE
Washington, DC 20002
Phone: (202) 906-2198
email: Achesoe@Amtrak.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR NEW HAMPSHIRE INSURANCE COMPANY:

7/27/16
Dated


Name (print): James J. Rowland
Title: VP + Asst. Comptroller
Address:

7/28/16
Dated



Name (print): Martin Bogot
Title: Assistant Secretary
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): DEVALEENA DAS
Title: ASSOCIATE GENERAL COUNSEL
Company: NEW HAMPSHIRE INSURANCE COMPANY
Address: 175 WATER STREET, 15TH FLOOR
NEW YORK, NY 10038
Phone: (212) 458-7765
email: devaleena.das@aig.com

Signature Page for CD regarding the Ward Transformer Superfund Site

Niagara Mohawk Power Corporation
FOR d/b/a National Grid :
[Print name of Settling Defendant]

8/19/16
Dated


 JP
Name (print): Charles Willard
Title: Authorized Representative
Address: 300 Erie Blvd W
Syracuse NY 13202

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: New York Dept of State
Address: c/o Corporation Service Company
80 State Street
Phone: Albany, NY 11207-2543
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Norfolk Southern Railway Company :
[Print name of Settling Defendant]

8/15/16
Dated


Name (print): Helen M. Hart
Title: General Solicitor
Address: 3 Commercial Place, Norfolk, VA 23510

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Helen M. Hart
Title: General Solicitor
Company: Norfolk Southern Corporation
Address: 3 Commercial Place
Norfolk, VA 23510
Phone: 757-629-2752
email: helen.hart@nscorp.com


Signature Page for CD regarding the Ward Transformer Superfund Site

NC Department of Agriculture & Consumer
Services a/k/a NC State Fair

FOR _____:
[Print name of Settling Defendant]

8.9.2016

Dated


Name (print): A. David Smith
Title: Chief Deputy Commissioner
Address: NC Department of Agriculture & Consumer Services
1001 Mail Service Center
Raleigh, NC 27699-1001

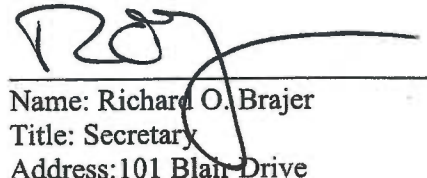
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Tina L. Hlabse
Title: General Counsel
Company: NC Department of Agriculture & Consumer Services
Address: 1001 Mail Service Center
Raleigh, NC 27699-1001
Phone: 919-707-3013
email: Tina.Hlabse@ncagri.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

**FOR: North Carolina Department of
Health and Human Services (NC DHHS)**

Aug. 15, 2016
Dated



Name: Richard O. Brajer
Title: Secretary
Address: 101 Blair Drive
2001 Mail Service Center
Raleigh, NC 27699-2001

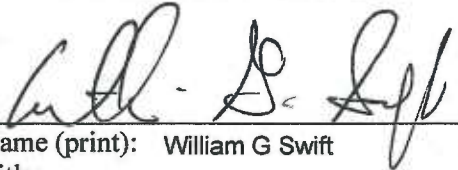
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name: Lisa Granberry Corbett
Title: Deputy General Counsel and
Process Agent
Company: NC DHHS
Address: 101 Blair Drive
2001 Mail Service Center
Raleigh, NC 27699-2001
Phone: (919) 855-4800
email: lisa.corbett@dhhs.nc.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The North Carolina Granite Corporation :
[Print name of Settling Defendant]

August 16, 2016
Dated

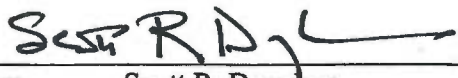

Name (print): William G Swift
Title: President & CEO
Address: 151 Granite Quarry Trail
Mt Airy, NC 27030

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Denis E. Jacobson
Title: Attorney at Law
Company: Tuggle Duggins P.A.
Address: P.O. Box 2888
Greensboro, NC 27402
Phone: (336) 378-1431
email: djacobson@tuggleduggins.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR NORTH CAROLINA STATE UNIVERSITY:

8.16.2016
Dated



Name: Scott R. Douglass
Title: Vice Chancellor for Finance and
Administration
Address: Campus Box 7201
106 Holladay Hall
Raleigh, NC 27695-7201

Agent Authorized to Accept Service Name: Brenton W. McConkey
On Behalf of Above-signed Party: Title: Assistant General Counsel
Company: North Carolina State University
Office of General Counsel
Address: Campus Box 7008
304D Holladay Hall
Raleigh, NC 27695-7008
Phone: 919-513-4051
email: brent_mcconkey@ncsu.edu

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR NOVARTIS CORPORATION:
[Print name of Settling Defendant]

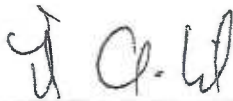
AUG. 18, 2016
Dated


Name (print): BARRY ROSENFELD
Title: SECRETARY
Address: 230 PARK AVE.
21ST FLOOR
NEW YORK, NY 10169

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Keith P. McManus, Esq.</u>
	Title:	<u>Attorney for Novartis Corporation</u>
	Company:	<u>Bressler, Amery & Ross, P.C.</u>
	Address:	<u>325 Columbia Turnpike Suite 301</u>
		<u>Florham Park, New Jersey 07932</u>
	Phone:	<u>973-514-1200</u>
email:	<u>kmcmamus@bressler.com</u>	

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Nucor Corporation :
[Print name of Settling Defendant]



August 1, 2016
Dated

Name (print): Tomas A. Miller
Title: Vice President and General Manager of Environmental Affairs
Address: 1915 Rexford Rd.
Charlotte, NC 28211

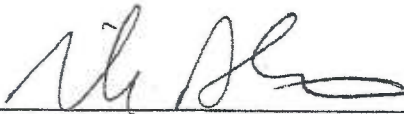
Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Nucor Corporation</u>
	Title:	<u>Office of General Counsel</u>
	Company:	<u></u>
	Address:	<u>1915 Rexford Rd</u>
		<u>Charlotte, NC 28211</u>
	Phone:	<u>(704) 366-7000</u>
email:	<u>Greg.Murphy@nucor.com</u>	

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Occidental Chemical Corporation :
[Print name of Settling Defendant]

8/8/16

Dated



Name (print): Michael G. Anderson

Title: Vice President

Address: 5 Greenway Plaza, Suite 110
Houston, Texas 77046

Agent Authorized to Accept Service	Name (print):	Frank A. Parigi
on Behalf of Above-signed Party:	Title:	Vice President and General Counsel
	Company:	Glenn Springs Holdings, Inc.
	Address:	5005 LBJ Freeway
		Dallas, Texas 75244
	Phone:	(972) 687-7503
	email:	frank_parigi@oxy.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Orbital ATK, Inc. :
[Print name of Settling Defendant]

18 Aug 2016
Dated

Elizabeth A. Humphrey
Name (print): Elizabeth Ann Humphrey
Title: Sr. Director, Finance & HR for
Address: Patrick Nolan, VP/Gen. Mgr.
1501 S. Clinton Street, 11th Fl.
Baltimore, MD 21224

Agent Authorized to Accept Service Name (print):
on Behalf of Above-signed Party: Title:

Company:
Address:


CT Corporation
4701 Cox Road, Suite 285
Glen Allen, VA 23060

Phone:
email:

Signature Page for CD regarding the Ward Transformer Superfund Site

Owen Electric Steel Company
FOR of South Carolina :
[Print name of Settling Defendant]

8/15/14
Dated

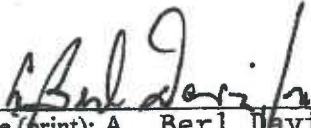

Name (print): Paul Kirkpatrick
Title: Secretary
Address: 6565 N. MacArthur Blvd.
Suite 800
Irving, TX 75039

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: C.T. Corporation
Address: 1999 Bryan Street
Suite 900, Dallas, TX 75201
Phone: 846-665-5799
email: ct.walters@kluwer.com

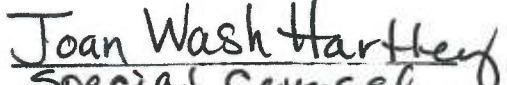
Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Palmetto Electric Cooperative, Inc.
[Print name of Settling Defendant]

August 16, 2016
Dated


Name (print): A. Berl Davis, Jr.
Title: President and CEO
Address: 1 Cooperative Way
Hardeeville, SC 29927

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print):

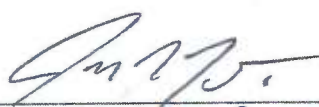

Title: Special Counsel
Company: Nexsen Pruet, LLC
Address: 1230 Main St., Ste 700
Columbia SC 29201
Phone: 803-540-2129
email: jhartley@nexsenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR PARKER HANNIFIN CORPORATION
[Print name of Settling Defendant]

August 4, 2016

Dated


Name (print): JOSEPH R. LEONTI
Title: VICE PRESIDENT, GENERAL COUNSEL AND SECRETARY
Address: 6035 PARKLAND BLVD.
CLEVELAND, OH 44124-4141

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): JOSEPH R. LEONTI
Title: VP, GENERAL COUNSEL AND SECRETARY
Company: PARKER HANNIFIN CORPORATION
Address: 6035 PARKLAND BLVD
CLEVELAND, OH 44124-4141
Phone: 216-896-2887
email: jleonti@parker.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR PCS Phosphate Company, Inc. :
[Print name of Settling Defendant]

8/15/16
Dated


Name (print): Robert Smith
Title: President
Address: 1101 Skokie Blvd., Suite 400, Northbrook, IL 60062

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Mary Beth Deemer
Title: Partner
Company: Jones Day
Address: 500 Grant St., Suite 4500
Pittsburgh, PA 15219
Phone: 412-394-7920
email: mbdeemer@jonesday.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: CITY OF PHILADELPHIA

8/18/2016
Dated

Patrick K. O'Neill

Patrick K. O'Neill, Esq.
Divisional Deputy City Solicitor
City of Philadelphia Law Department
1515 Arch Street, 16th Floor
Philadelphia, PA 19103

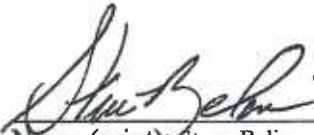

Agent Authorized to Accept Service
On Behalf of Above-signed Party

Name: Patrick K. O'Neill, Esq.
Title: Divisional Deputy City Solicitor
Mailing Address: City of Philadelphia
Law Department
1515 Arch Street, 16th Fl.
Philadelphia, PA 19102
Phone Number: 215-683-5172
Email: patrick.oneill@phila.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

Phillips 66 Company as successor in interest
FOR to ConocoPhillips Company _____ :
[Print name of Settling Defendant]

8-10-16
Dated

 
Name (print): Steve Belin
Title: Remediation Manager, Phillips 66 Company
Address: 420 South Keeler, PB-17-1715,
Bartlesville, Oklahoma 74003


Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Steve Belin
Title: Remediation Manager, Phillips 66 Company
Company: Phillips 66 Company
Address: 420 S. Keeler Ave. PB-17-1715
Bartlesville, Oklahoma 74003
Phone: 918.977.5399
email: Steve.A.Belin@p66.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR PPL Electric Utilities Corp :
[Print name of Settling Defendant]



8/17/16
Dated



Name (print): Michael Hasel
Title: Manager of Environmental
Address: 2 N. 9th Street
Allentown, PA 18101

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Arundhati Khanwalkar
Title: Sr Counsel & Corp Compliance Director
Company: PPL Services Corporation
Address: Two North Ninth Street
Allentown, PA 18101-1179
Phone: 610-774-5466
email: akhanwalkar@pplweb.com

Signature Page for CD regarding the Ward Transformer Superfund Site

August 15, 2016

City of Radford, Virginia



David C. Ridpath
City Manager
10 Robertson Street, Radford, Virginia 24141

Agent Authorized to Accept Service
On behalf of Above-signed Party:

Name:	Gail Cook DeVilbiss
Title:	Radford City Attorney
Company:	Gail Cook DeVilbiss, P.C.
Address:	1128 East Main Street Radford, Virginia 24141
Phone Number:	(540) 639-4056
Email:	gcdlaw@verizon.net

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: RESIDUAL ENTERPRISES CORPORATION
[Print name of Settling Defendant]

7-25-16

Dated



Name (print): Nathan D. Goldman

Title: Vice President

Address: 500 Water Street-J150, Jacksonville, FL 32202

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): JEFFREY W. STYRON

Title: SENIOR COUNSEL - ENVIRONMENTAL

Company: CSX TRANSPORTATION, INC.

Address: 500 WATER ST., J150

JACKSONVILLE, FL 32202


Phone: (904) 366-4058

email: JEFF-STYRON@CSX.COM

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Riley Power Inc. :
[Print name of Settling Defendant]

August 1, 2016
Dated


Name (print): Anthony A. Brandano
Title: Vice President, Treasurer and Chief Financial Officer
Address: 5 Neponset Street, Worcester, MA 01606

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Bradley Friesen, Esq.
Title: _____
Company: Bell Davis Pitt
Address: 100 N. Cherry Street, Suite 600
Winston-Salem, NC 27101
Phone: 336-722-3700
email: bfriesen@belldavispitt.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Roanoke Electric Steel Corporation:

8/8/16
Dated

T. Joe Crawford
Name (print): T. Joe Crawford
Title: Vice President and General Manager
Address: 102 Westside Boulevard NW
Roanoke, VA 24017


Agent Authorized to Accept Service
On Behalf of Above-signed Party:


Name (print): David R. Steiner
Title: Attorney for Roanoke Electric Steel
Corporation
Company: Barrett McNagny LLP
Address: 215 East Berry Street
Fort Wayne, IN 46802
Phone: (260) 423-8915
email: drs@barrettllaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Robert Bosch LLC:
[Print name of Settling Defendant]

8/17/16
Dated


Stephen Borgsdorf
Senior Legal Counsel NA
38000 Hills Tech Drive
Farmington Hills, MI 48331
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

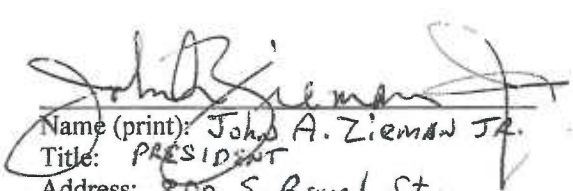

Name (print): Jerry Johnson
Title: Deputy General Counsel NA
Address: 38000 Hills Tech Drive
Farmington Hills, MI 48331

Title: _____
Company: CSC - LAWYERS INCORPORATING SERVICE
Address: 601 ABBOT RD.
EAST LANSING, MI 4823
Phone: 1-866-403-5272
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Royal Street Junk Co., Inc. :
[Print name of Settling Defendant]

8/3/2016
Dated


Name (print): John A. Ziemann Jr.
Title: PRESIDENT
Address: 800 S. Royal St.
Mobile, AL 36603

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Jacob H. Wellman
Title: Partner
Company: Teague Campbell Dennis & Gorham, LLP
Address: P. O. Box 19207
Raleigh, NC 27619-9207
Phone: (919) 873-0166
email: jwellman@teaguecampbell.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Rubbermaid Inc./Newell Brands Inc. (f/k/a
[Print name of Settling Defendant] Newell
Rubbermaid
Inc.)

8/1/2016
Dated



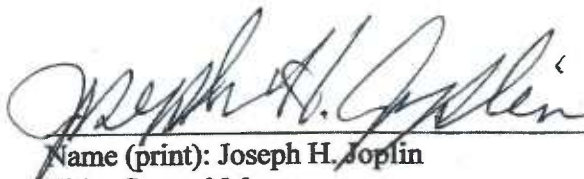
Name (print): Michael R. Peterson
Title: Assistant Secretary
Address: 6655 Peachtree Dunwoody Road
Atlanta, Ga. 30022

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Kristin Jones
Title: Senior Environmental & Regulatory
Company: Newell Brands Inc. Counsel
Address: 6655 Peachtree Dunwoody Rd.
Atlanta, GA 30022
Phone: (770) 418.7822
email: Kristin.jones@newellco.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Rutherford Electric Membership Corporation:

8/5/16
Dated


Name (print): Joseph H. Joplin
Title: General Manager
Address: P.O. Box 1569, Forest City, NC
28043


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Joseph H. Joplin
Title: General Manager
Company: Rutherford Electric Membership
Corporation
Address: P.O. Box 1569
Forest City, NC 28043
Phone: 828-245-1621
email: jjoplin@remc.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The City of San Antonio, acting by and through
City Public Service Board ("CPS Energy"):

8/25/2016
Dated



Name (print): Paul Barham
Title: Senior Vice President of
Delivery Engineering, Integrated Planning,
Substation & Transmission
Address: 145 Navarro
P.O. Box 1771
San Antonio, Texas 78296

Agent Authorized to Accept Service On behalf of Above-signed Party: Name (print): Carolyn Shellman
Title: Chief Legal & Administrative Officer
Company: The City of San Antonio, acting by and through
City Public Service Board ("CPS Energy")
Address: 145 Navarro
P.O. Box 1771
San Antonio, Texas 78296
Phone: (210) 353-4996
Email: CEShellman@CPSEnergy.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR  Santee Electric Cooperative, Inc.
[Print name of Settling Defendant]

8/8/16
Dated


Name (print): Robert G. Ardis III
Title: President & CEO
Address: 424 Sumter Hwy
Kyree, SC 29556

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

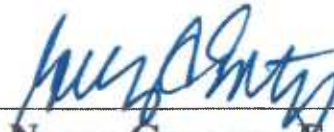
Name (print): Joan Wash Hartley
Title: Special Counsel
Company: Nexsen Pruet, LLC
Address: 1230 Main St., Ste. 700
Columbia SC 29201
Phone: 803-540-2129
email: jhartley@nexsenpruet.com

**Signature Page for CD regarding the Ward
Transformer Superfund Site**

FOR Seabrook Enterprises, Inc.

9-11-16

Dated



Name Gregory Estep

Title: President and Board Member

Address: 205 E. River Park Circle,

Suite 310

Fresno, CA 93720



Agent Authorized to Accept Service Name

(print): Carl Askey

**On Behalf of Above-signed Party: Title: Vice-
President – Finance/Olam Edible Nuts**

Company: Seabrook Enterprises, Inc.

Address: 2077 Convention

Center Concourse, Suite 150

College Park, GA 30337

Phone: 404-209-2626

email: carl.askey@olamnet.

com

TRI1\947396v1

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Shieldalloy Metallurgical Corporation
[Print name of Settling Defendant]

8/19/2016
Dated

Dennis R. Shea
Name (print): Dennis R. Shea
Title: Director
Address: 35 S.W. Boulevard
P.O. Box 768
Newfield, NJ 08344

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Dennis R. Shea
Title: Director
Company: Shieldalloy Metallurgical Corporation
Address: 435 Devon Park Drive, Building 201
Wayne, PA 19087
Phone: 610-293-5812
email: dshea@amy-nv.com

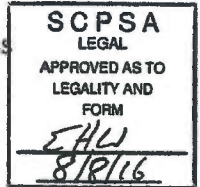
Signature Page for CD regarding the Ward Transformer Superfund Site

FOR South Carolina Public Service Authority:

8/15/16
Date

Parcels J. Williams

Name: Pamela J. Williams
Title: Sr. Vice President, Corporate Services
Address: One Riverwood Drive
Moncks Corner, SC 29461



Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name: Elizabeth H. Babs Warner
Title: VP, Legal Services & Corporate Secretary
Company: Santee Cooper
Address: One Riverwood Drive
Moncks Corner, SC 29461
Phone: 843-761-7004
Email: ehwarner@santeecooper.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR South Central Power Company
[Print name of Settling Defendant]

July 25, 2016
Dated

Richard Lemonds
Name (print): Richard Lemonds
Title: President and CEO
Address: 2780 Coonpath Rd NE
Lancaster OH 43130

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Richard Lemonds
Title: President & CEO
Company: South Central Power Company
Address: 2780 Coonpath Rd NE
Lancaster Ohio 43130
Phone: 740-689-6181
email: lemonds@southcentralpower.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR SOUTHERN ALLOY CORPORATION ;
[Print name of Settling Defendant]

8/5/2016
Dated

Billy T. Bobbitt
Name (print): Billy T. Bobbitt
Title: President
Address: Post Office Box 1168
Sylacauga, Alabama 35150


Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Billy T. Bobbitt
Title: Registered Agent
Company: Southern Alloy Corporation
Address: 36280 U. S. Highway 280
Sylacauga, Alabama 35150-1168
Phone: (256) 245-5237
email: bbobbitt@southernalloy.com

Certified # 7014 0150 0001 9019 2245

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Southern Maryland Electric Cooperative, Inc. :
[Print name of Settling Defendant]

08/16/2016
Dated

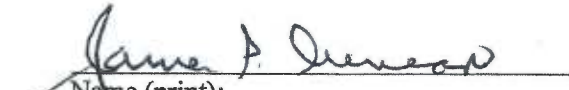

Name (print): Austin J. Slater, Jr.
Title: President & C.E.O.
Address: Southern Maryland Electric Cooperative, Inc.
15035 Burnt Store Road
P.O. Box 1937
Hughesville, MD 20637

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Mark A. MacDougall
Title: Senior Vice President and General Counsel
Company: Southern Maryland Electric Cooperative, Inc
Address: 15035 Burnt Store Road, P.O. Box 1937
Hughesville, MD 20637
Phone: (301) 274-4307
email: Mark.Macdougall@smeco.coop

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Sumter Electric Cooperative, Inc.
[Print name of Settling Defendant]

8/5/2016
Dated



Name (print):
Title:
Address:

Agent Authorized to Accept Service	Name (print):	<u>Lewis W. Stone</u>
on Behalf of Above-signed Party:	Title:	<u>Attorney</u>
	Company:	<u>Stone & Gerken, P.A.</u>
	Address:	<u>4850 N. Highway 19A</u>
		<u>Mount Dora, FL 32757</u>
	Phone:	<u>352-357-0330</u>
	email:	<u>Lewis@StoneandGerken.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR SUNBELT TRANSFORMER, LTD :
[Print name of Settling Defendant]

AUGUST 2, 2016
Dated



Name (print): JAMES GENTRY
Title: CFO
Address: 1922 SOUTH MLK JR. DRIVE
TEMPLE, TX 76504

Agent Authorized to Accept Service Name (print): _____
on Behalf of Above-signed Party: Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Tallahassee Memorial HealthCare, Inc. :
[Print name of Settling Defendant]

8/18/2016
Dated


Name (print): William A. Giudice
Title: Vice President and Chief Financial Officer
Address: 1300 Miccosukee Road
Tallahassee, FL 32308

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Susan K. Spurgeon, Esq.
Title: Attorney
Company: Pennington, P.A.
Address: 2701 N. Rocky Point Drive, Suite 900
Tampa, FL 33607
Phone: 813-639-9599
email: susan@penningtonlaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR TOWN OF TARBORO :
[Print name of Settling Defendant]

8/12/16
Dated

Taro Knight
Name (print): Taro Knight
Title: Mayor-ProTempore
Address: P.O. Box 220
500 Main Street
Tarboro, NC 27886

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Troy R. Lewis
Title: Town Manager
Company: Town of Tarboro
Address: P.O. Box 220 500 Main St.
Tarboro, NC 27886
Phone: 252-641-4250
email: TroyLewis@tarboro-nc.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Timken US LLC :
[Print name of Settling Defendant]

8/15/2016
Dated



Name (print) David B. Nolin
Title: Director - Legal Services
Address: 4500 Mount Pleasant St. NW
North Canton, OH 44720

**Agent Authorized to Accept Service
On Behalf of Above-signed Party:**

Name (print): David B. Nolin
Title: Director - Legal Services
Company: The Timken Company
Address: 4500 Mount Pleasant St. NW
North Canton, OH 44720
Phone: 234-262-4363
email: david.nolin@timken.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Transcontinental Gas Pipe Line Co., LLC
[Print name of Settling Defendant] *RM*

8/3/16
Dated

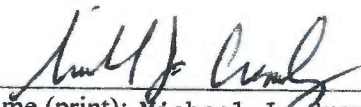
Rebecca Brown
Name (print): Rebecca Brown
Title: Manager, Environmental Services
Address: One Williams Center
Tulsa, OK 74172

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Donald E. Hockaday, III
Title: Senior Counsel
Company: Transcontinental Gas Pipe Line Co., LLC
Address: 2800 Post Oak Boulevard
Houston, TX 77056
Phone: (713) 215-2381
email: donald.e.hockadayiii@williams.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Trap Rock Industries, Inc. :
[Print name of Settling Defendant]

August 15, 2016
Dated

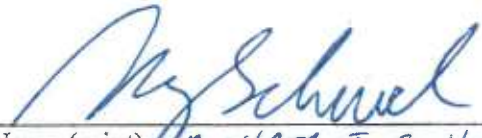

Name (print): Michael J. Crowley
Title: Vice President
Address: P.O. Box 419
Kingston NJ 08528

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Bonnie A. Barnett</u>
	Title:	<u>Esquire</u>
	Company:	<u>Drinker Biddle & Reath LLP</u>
	Address:	<u>One Logan Sq., Ste. 2000</u>
		<u>Phila., PA 19103</u>
	Phone:	<u>215-988-2916</u>
	email:	<u>bonnie.barnett@dbr.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR TREDEGAR FILM PRODUCTS CORPORATION:

8/10/16
Dated



Name (print): MICHAEL J. SCHEWEL
Title: Vice President, General Counsel & Secretary
Address: 1100 Boulders Parkway
Richmond VA 23225

Agent Authorized to Accept Service	Name:	<u>Dan J. Jordanger</u>
on Behalf of Above-signed Party:	Title:	<u>Partner</u>
	Company:	<u>Hunton & Williams LLP</u>
	Address:	<u>951 East Byrd Street</u>
		<u>Richmond, Virginia 23219</u>
	Phone:	<u>(804) 788-8609</u>
	email:	<u>djordanger@hunton.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Trinity Industries, Inc. :
[Print name of Settling Defendant]

8-2-16
Dated



Name (print): S. Theis Rice
Title: Sr. VP and CLO
Address: 2525 N. Stemmons Fwy.
Dallas, TX 75201

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Trustees of the University of Pennsylvania:

August 3, 2016
Dated



Name (print): Benjamin J. Evans
Title: Executive Dir., Office of Risk Mgmt. & Ins.
Address: 3431 Walnut Street
Room 421 Franklin Bldg.
Philadelphia, PA 19104

Agent Authorized to Accept Service Name (print): Brendan K. Collins
on Behalf of Above-signed Party:

Company: Ballard Spahr LLP
Address: 1735 Market Street, 51st Flr.
Philadelphia, PA 19103
Phone: 215-864-8106
email: collins@ballardspahr.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Union Carbide Corporation
[Print name of Settling Defendant]

8-5-16
Dated


Mary J Drawes
Name (print): Mary F. Drawes
Title: Authorized Representative
Address: 1790 Building
Midland, MI 48674

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: CT Corporation System
Address: 111 Eighth Ave
New York, NY 10011
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR United States Pipe and Foundry Company, LLC
[Print name of Settling Defendant]

8/12/16
Dated


Name (print): Brad Overstreet
Title: CFO
Address: Two Chase Corporate Drive
Suite 200
Birmingham, AL 35244

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Geoff Rathgeber
Title: Associate
Company: Alston + Bird LLP
Address: 1201 W. Peachtree St
Atlanta, GA 30309
Phone: 404.881.4974
email: Associate geoff.rathgeber@alston.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR United States Steel Corporation :
[Print name of Settling Defendant]

8/15/2016
Dated



Name (print): Andrew G. Thiros
Title: Counsel-Environmental
Address: 600 Grant Street, Room 1500
Pittsburgh, PA 15219

Agent Authorized to Accept Service	Name (print):	<u>Andrew G. Thiros</u>
on Behalf of Above-signed Party:	Title:	<u>Counsel-Environmental</u>
	Company:	<u>United States Steel Corporation</u>
	Address:	<u>600 Grant Street, Room 1500</u>
		<u>Pittsburgh, PA 15219</u>
	Phone:	<u>412-433-2983</u>
	email:	<u>agthiros@uss.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Unitil Energy Systems Inc.



Dated: 08/15/2016

Name (print): Richard Franzio

Title: Dir. Business Continuity & Compliance

Address: 6 Liberty Lane West, Hampton, NH 03842

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): _____

Title: _____

Company: _____

Address: _____

Phone: _____

email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The University of North Carolina at Chapel Hill:
[Print name of Settling Defendant]



A. BRADLEY IVES, ASSOC. VICE CHANCELLOR FOR

8/10/16
Dated

Name (print): Matthew M. Fajack
Title: Vice Chancellor for Finance and Administration
Address: 300 South Building, 200 E. Cameron Avenue
Chapel Hill, NC 27599

**Agent Authorized to Accept Service
On Behalf of Above-signed Party:**

Name (print): David E. Fox
Title: Attorney
Company: Moore & Van Allen PLLC
Address: 100 North Tryon Street, Suite 4700
Charlotte, NC 28202-4003
Phone: (919) 286-8069
email: davidfox@mvalaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR VEOLIA ENVIRONMENTAL SERVICES NORTH AMERICA LLC, for itself and on behalf of Veolia ES Montenay Holdings LLC, but only to the extent that Veolia ES Montenay Holdings LLC's alleged liability with respect to the Site arose in connection with the same transaction from which Veolia Environmental Services North America LLC's alleged liability arose

Aug. 8, 2016
Dated



Francis X. Ferrara
Senior Vice President & Deputy General Counsel
Veolia North America
120 Water Street
North Andover, MA 01845

Agent Authorized to Accept Service
on Behalf of Above –signed Party:

Philip G. Kief
Director, Corporate Counsel, Industrial Business
Veolia North America
4760 World Houston Parkway, Suite 100,
Houston, TX 77032
832-300-5748
Philip.kief@veolia.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Villanova University:
[Print name of Settling Defendant]

8/18/16
Dated


Debra F. Fickler
Name (print): Debra F. Fickler
Title: Vice President and General Counsel
Address: 800 Lancaster Avenue
Villanova, PA 19085

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Michael T. Hamilton
Title: Attorney
Company: Marks O'Neill O'Brien Doherty & Kelly P.C.
Address: 1800 JFK Blvd.
Suite 1900 Philadelphia, Pa 19103
Phone: 215-564-6688
email: mhamilton@moodk/qw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Virginia Electric & Power Company
[Print name of Settling Defendant]

7/26/16
Dated


Name (print): Mark O. Webb
Title: Sr. V.P. & General Counsel
Address: 120 Tredegar St.
Richmond, VA 23219

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: CT Corporation System
Address: 4701 Cox Road
Suite 285
Phone: Glen Allen, VA 23060
email: (804) 217-7255

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Vulcan Construction Materials, LLC
[Print name of Settling Defendant]

8/5/16
Dated


Jerry F. Atkins, Jr.
Name (print): Jerry F. Atkins, Jr.
Title: MANAGER & SECRETARY
Address: 1200 Urban Center Drive
Birmingham, AL 35242

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Doug Arnold
Title: Partner
Company: Alston and Bird LLP
Address: 1201 West Peachtree St.
Atlanta, GA 30309
Phone: (404) 881-7000
email: doug.arnold@alston.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Warren Electric Cooperative, Inc.:
[Print name of Settling Defendant]

8/2/16
Dated


Name (print): Gary W. Franklin
Title: Chief Executive Officer
Address: 320 East Main Street
Youngsville, PA 16371

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Joan W. Hartley, Esq.
Title: Counsel
Company: Nexsen Pruet, LLC
Address: 1230 Main Street, Suite 700
Columbia, SC 29201
Phone: (803) 540-2129
email: jhartley@nexsenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Wartburg College:
[Print name of Settling Defendant]

July 29, 2016
Dated

Wartburg College by Rich Seggerman
Name (print) Wartburg College by Rich Seggerman
Title: VP for Finance and Administration
Address:

**Agent Authorized to Accept Service
On Behalf of Above-signed Party:**

Name (print): Rich Seggerman
Title: VP for Finance and Administration
Company: Wartburg College
Address: 100 Wartburg Blvd
Waverly, IA 50677

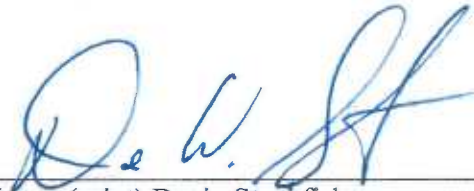
Phone: 319-830-9201
email: Richard.seggerman@wartburg.edu

TRI1\947396v1

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Weyerhaeuser Company _____ :

8/2/16
Dated _____



Name: (print) Devin Stockfish

Title: Senior Vice President Counsel and
Corporate Secretary

Address: 33663 Weyerhaeuser Way S
Federal Way, WA 98003

Agent Authorized to Accept Service Name (print): Rachel McCall

On Behalf of Above-Signed Party: Title: Assistant General Counsel
Company: Weyerhaeuser Company
Address: 33663 Weyerhaeuser Way S.
Federal Way, WA 98003
Phone: (253) 924-2032
email: rachel.mccall@weyerhaeuser.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Peace College of Raleigh, Inc.
(now William Peace University):

8/10/16

Dated



Name (print): George A. Yearwood
Title: Vice President for Administration &
Chief Financial Officer
Address: 15 E. Peace St., Raleigh, NC 27604


Agent Authorized to Accept Service

Name (print): George A. Yearwood
on Behalf of Above-signed Party: Title:
Vice President for Administration & Chief
Financial Officer
Company: Peace College of Raleigh, Inc.
(now William Peace University)
Address: 15 E. Peace St.
Raleigh, NC 27604
Phone: 919 508 2035
email: ryearwood@peace.edu

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR City of Winston-Salem :
[Print name of Settling Defendant]

August 17, 2016
Dated


Name (print): Lee Garrity
Title: City Manager
Address: P.O. Box 2511
Winston-Salem, NC 27102


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Lee Garrity
Title: City Manager
Company: City of Winston-Salem
Address: P.O. Box 2511
Winston-Salem, NC 27102
Phone: 336-734-1301
email: leeg@cityofws.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR WOODSTREAM CORPORATION:
[Print name of Settling Defendant]

July 26, 2016
Dated


Name (print): HARRY E. WHALEY
Title: CEO + PRESIDENT
Address: 69 N LOCUST STREET
LITIZ, PA 17543

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: ET CORPORATION
Address: _____
Phone: _____
email: _____

Appendix A

Sales-Only Cashout Settling Defendants

**APPENDIX A -
SALES-ONLY CASHOUT SETTLING DEFENDANTS**

	NAME	AMOUNT
1	3M Company	\$10,000
2	Adams-Columbia Electric Cooperative	\$10,000
3	Aerojet Rocketdyne Holdings, Inc., formerly named Gencorp, Inc.	\$10,000
4	Air Products and Chemicals, Inc.	\$10,000
5	Alcoa Inc.	\$10,000
6	American Biltrite Inc.	\$10,000
7	Appalachian Power Company	\$10,000
8	Arkema Inc.	\$10,000
9	Augusta State University n/k/a Augusta University	\$10,000
10	Barnes and Powell Electrical Company	\$10,000
11	Bedford Rural Electric Cooperative, Inc.	\$10,000
12	Bedford, Town of	\$10,000
13	Blackstone, Town of VA	\$10,000
14	Brazos Electric Power Cooperative, Inc.	\$10,000
15	Buist Electric	\$10,000
16	Caterpillar Inc.	\$10,000
17	CGX Energy, LLC (f/k/a Cogentrix Energy, LLC, f/k/a Cogentrix Energy, Inc.)	\$10,000
18	Cohen & Green Salvage Company, Inc.	\$10,000
19	Conopco, Inc. f/k/a Unilever	\$10,000
20	Corning Incorporated, formerly known as Corning Glass Works	\$10,000
21	City of Dover	(\$70,000)
22	Duquesne Light Company	\$10,000
23	East Central Regional Hospital, Augusta, Ga.	\$10,000
24	East Kentucky Power Cooperative	\$10,000
25	Entergy Arkansas, Inc., formerly known as Arkansas Power and Light, Inc.	\$10,000
26	Environmental Protection Services, Inc.	(\$70,000)
27	Firelands Electric Cooperative, Inc.	\$10,000
28	Florida Power & Light Company/NextEra	\$10,000
29	FluiDyne Engineering Corp. dba Phoenix Solutions Co.	\$10,000
30	G&S Motor Equipment Co., Inc.	\$10,000
31	General Extrusions, Inc.	\$10,000
32	GGP-TRC, LLC, f/k/a The Rouse Company, LLC	\$10,000
33	Green Mountain Power, Inc.	\$10,000
34	Guernsey-Muskingum Electric Cooperative, Inc.	\$10,000
35	H&K Group, Inc. f/k/a/ Haines & Kibblehouse	\$10,000
36	Hancock Wood Electric Cooperative, Inc.	\$10,000
37	The Hershey Company	\$10,000
38	The Hillshire Brands Company, f/k/a Sara Lee Corporation, including all present and former subsidiaries and affiliates thereof	\$10,000
39	Holladay Property Services Midwest, Inc.	\$10,000

40	Huntsville Utilities	\$10,000
41	Jet Electric Motor Company, Inc.	\$10,000
42	Kelly Electric	\$10,000
43	Kingsport Power Company	\$10,000
44	Kraft Heinz Foods Company, for itself and on behalf of Mondelēz Global LLC	\$10,000
45	Lewis Electric Supply Co., Inc.	\$10,000
46	Mass. Electric Construction Co.	\$10,000
47	MidAmerican Energy Company	\$10,000
48	Niagara Mohawk Power Corporation dba National Grid	\$10,000
49	Occidental Chemical Corporation	\$10,000
50	Phillips 66 Company as successor to ConocoPhillips Company	\$10,000
51	PPL Electric Utilities Corporation	\$10,000
52	Royal Street Junk Company, Inc.	\$10,000
53	Rubbermaid Inc./Newell Brands Inc. (f/k/a Newell Rubbermaid Inc.)	\$10,000
54	The City of San Antonio, acting by and through City Public Service Board (a/k/a CPS Energy)	\$10,000
55	Santee Electric Cooperative, Inc.	\$10,000
56	South Carolina Public Service Authority (Santee Cooper)	\$10,000
57	South Central Power Company	\$10,000
58	Sumter Electric Cooperative, Inc.	\$10,000
59	Sunbelt Transformer, LTD.	\$10,000
60	Timken US LLC	\$10,000
61	Trustees of the University of Pennsylvania	\$10,000
62	United States Steel Corporation	\$10,000
63	Unitil Energy Systems, Inc.	\$10,000
64	Villanova University	\$10,000
65	Virginia Electric & Power Company	\$10,000
66	Warren Electric Cooperative, Inc.	\$10,000
67	Wartburg College	\$10,000
	TOTAL	\$510,000

* Net amount due or refund owed, accounting for prior \$80,000 contribution to OU-1 costs under UAO

† To be paid as initial payment of \$2,500 and subsequent monthly payments of \$2,500 and \$5,000

Appendix B

Cashout Settling Defendants

APPENDIX B - CASHOUT SETTLING DEFENDANTS

	NAME	AMOUNT
1	Alcan Primary Products Corporation	\$15,000
2	Carlisle Construction Materials, LLC, f/k/a Carlisle SynTec Incorporated	\$15,000
3	CHRISTUS Health Northern Louisiana	\$15,000
4	DACCO, Incorporated	\$15,000
5	Duke Energy Progress, LLC f/k/a Carolina Power & Light Company d/b/a Progress Energy Carolinas	\$165,000
6	East Penn Manufacturing Co.	\$15,000
7	Emma L. Bixby Medical Center	\$15,000
8	Erachem Comilog, Inc.	(\$65,000) *
9	IES Commercial, Inc.	\$15,000
10	Imerys Carbonates USA, Inc.	\$15,000
11	J.C. Blair Memorial Hospital	\$15,000
12	Koch Industries	\$15,000
13	LaCrosse Footwear, Inc.	\$15,000
14	Parker Hannifin Corporation	\$15,000
15	Peace College, k/n/a William Peace University	\$15,000
16	Riley Power Inc.	\$15,000
17	Robert Bosch LLC	\$15,000
18	Southern Alloy Corporation	\$15,000
19	Tallahassee Memorial HealthCare, Inc.	\$15,000
20	Transcontinental Gas Pipe Line Company, LLC	\$15,000
21	Tredegear Film Products Corporation	\$15,000
22	Woodstream Corporation	\$15,000
	TOTAL	\$400,000

* Net amount due or refund owed, accounting for prior \$80,000 contribution to OU-1 costs under UAO

Appendix C

Settling Repair Defendants

**APPENDIX C -
SETTLING REPAIR DEFENDANTS**

	NAME	INITIAL NET CONTRIBUTION	TOTAL CONTRIBUTION	ALLOCATION FOR ANY FUTURE OU-1 COSTS (%)
1	Akers National Roll Company (named as National Roll)	(\$44,500) *	\$48,000	0.96386
2	BAE Systems Norfolk Ship Repair Inc.	\$48,000	\$48,000	0.96386
3	Baltimore Gas & Electric Company	\$36,000	\$36,000	0.72289
4	BASF Corporation	\$36,000	\$36,000	0.72289
5	Bayer CropScience, Inc.	\$66,000	\$66,000	1.32530
6	Cape Hatteras Electric Membership Corporation	\$90,000	\$90,000	1.80723
7	Cargill, Incorporated	\$48,000	\$48,000	0.96386
8	Carr & Duff, Inc., for itself and on behalf of Ed Duff	(\$14,500) *	\$78,000	1.56627
9	Cemex Construction Materials Florida, LLC	\$48,000	\$48,000	0.96386
10	Chemical Products Corporation	\$78,000	\$78,000	1.56627
11	Chevron Mining Inc.	\$36,000	\$36,000	0.72289
12	Cleveland Electric Company	\$48,000	\$48,000	0.96386
13	Continental Grain Company	\$36,000	\$36,000	0.72289
14	Cooper Power Systems, n/k/a Eaton Corporation	\$60,000	\$60,000	1.20482
15	Cooper Tire & Rubber Company	\$60,000	\$60,000	1.20482
16	Delaware Electric Cooperative, Inc.	\$102,000	\$102,000	2.04819
17	Donovan Spring Company, Inc. and Donovan Equipment Company, Inc., formerly known as Donovan Spring & Equipment Co., Inc., Donovan Spring & Equipment Co. of N.H., Inc. and Gasification Specialties, Inc.	\$36,000	\$36,000	0.72289
18	Dravo Corp.	\$60,000	\$60,000	1.20482
19	E. I. du Pont de Nemours and Company	\$60,000	\$60,000	1.20482
20	Endicott Clay Products Company	\$60,000	\$60,000	1.20482
21	ExxonMobil Oil Corporation	\$48,000	\$48,000	0.96386
22	Fabri-Kal Corporation	\$66,000	\$66,000	1.32530
23	FMC Corporation	\$48,000	\$48,000	0.96386
24	Four County Electric Membership Corporation	(\$14,500) *	\$78,000	1.56627
25	Frontier Communications Corporation	\$60,000	\$60,000	1.20482
26	Furman University	\$66,000	\$66,000	1.32530
27	General Electric Company (named as RCA, n/k/a General Electric Company)	(\$56,500) *	\$36,000	0.72289
28	Georgia-Pacific LLC	\$66,000	\$66,000	1.32530
29	GrafTech International Holdings Inc., formerly known as UCAR Carbon Company Inc.	\$66,000	\$66,000	1.32530
30	Grand Haven Board of Light and Power	\$36,000	\$36,000	0.72289
31	Green Circle Growers, Inc.	\$48,000	\$48,000	0.96386
32	Greenwood Mills, Inc.	\$36,000 †	\$36,000	0.72289
33	Guam Power Authority	\$36,000	\$36,000	0.72289
34	Harsco Corp., f/k/a Multiserve North America f/k/a Heckett	\$48,000	\$48,000	0.96386
35	Haynes International, Inc.	\$36,000	\$36,000	0.72289
36	Hercules Incorporated	\$48,000	\$48,000	0.96386
37	Honeywell	\$66,000	\$66,000	1.32530
38	Hudson Light and Power Department	\$48,000	\$48,000	0.96386
39	Huntington Ingalls Inc., f/k/a Northrup Grumman Shipbuilding, Inc.	\$36,000	\$36,000	0.72289
40	Imerys Fused Minerals Greeneville, Inc.	(\$14,500) *	\$78,000	1.56627
41	International Paper Company	\$90,000	\$90,000	1.80723
42	Intertape Polymer Group, Inc.	\$48,000	\$48,000	0.96386
43	Jessop Steel, LLC	\$48,000	\$48,000	0.96386
44	Lafarge Mid-Atlantic, LLC	\$48,000	\$48,000	0.96386
45	Town of Louisburg	\$66,000	\$66,000	1.32530
46	Martin Marietta Materials, Inc.	\$102,000	\$102,000	2.04819
47	Mid-Valley Pipeline Company	\$60,000	\$60,000	1.20482
48	Mittal Steel USA-Lancashire Coal Inc.	\$48,000	\$48,000	0.96386
49	City of Monroe	\$66,000	\$66,000	1.32530
50	The National Lime and Stone Company	\$60,000	\$60,000	1.20482
51	National Railroad Passenger Corporation ("Amtrak")	\$66,000	\$66,000	1.32530
53	New Hampshire Insurance Company	\$48,000	\$48,000	0.96386
54	Norfolk Southern Railway Company	\$48,000	\$48,000	0.96386
55	North Carolina Department of Agriculture and Consumer Services a/k/a North Carolina State Fair	\$102,000	\$102,000	2.04819
56	North Carolina Department of Health and Human Services	\$90,000	\$90,000	1.80723

57	The North Carolina Granite Corporation	\$48,000		\$48,000	0.96386
	North Carolina State University	\$60,000		\$60,000	1.20482
58	North Georgia Electric Membership Corporation	\$111,500	*	\$204,000	4.09639
59	Novartis Corporation	\$48,000		\$48,000	0.96386
60	Nucor Corporation	\$60,000		\$60,000	1.20482
61	Orbital ATK, Inc. f/k/a Alliant Techsystems, Inc. (ATK Launch Systems Inc.)	\$78,000		\$78,000	1.56627
62	Owen Electric Steel Company of South Carolina	(\$32,500)	*	\$60,000	1.20482
63	Palmetto Electric Cooperative, Inc.	\$48,000		\$48,000	0.96386
64	City of Philadelphia	\$66,000		\$66,000	1.32530
65	City of Radford, Virginia	\$36,000		\$36,000	0.72289
66	Residual Enterprises Corporation, f/d/b/a CSX Residual Company	\$60,000		\$60,000	1.20482
67	Roanoke Electric Steel Corporation	\$66,000		\$66,000	1.32530
68	Rutherford Electric Membership Corporation	\$66,000		\$66,000	1.32530
69	Seabrook Enterprises, Inc.	\$48,000		\$48,000	0.96386
70	Shieldalloy Metallurgical Corporation	\$60,000		\$60,000	1.20482
71	Southern Maryland Electric Cooperative, Inc.	(\$32,500)	*	\$60,000	1.20482
72	Town of Tarboro	\$48,000		\$48,000	0.96386
73	Trap Rock Industries, Inc.	\$48,000		\$48,000	0.96386
74	Trinity Industries, Inc.	\$48,000		\$48,000	0.96386
75	Union Carbide Corporation	(\$2,500)	*	\$90,000	1.80723
76	United States Pipe and Foundry Company, LLC	\$48,000		\$48,000	0.96386
77	The University of North Carolina at Chapel Hill	\$87,500	*	\$180,000	3.61446
78	Veolia Environmental Services North America LLC for itself and as otherwise indicated on the signature block	\$66,000		\$66,000	1.32530
79	Vulcan Construction Materials, LLC	\$78,000		\$78,000	1.56627
80	Weyerhaeuser Company	\$66,000		\$66,000	1.32530
81	City of Winston-Salem	\$66,000		\$66,000	1.32530
		\$4,055,000		\$4,980,000	100.00000

* Net amount due or refund owed, accounting for prior \$92,500 contribution to OU-1 costs under UAO.

† To be paid as initial payment of \$9,000 and three subsequent quarterly installments of \$9,000

Appendix D

UAO Parties

Appendix D

UAO Parties

1. City of Dover
2. Environmental Protection Services, Inc.
3. Four County Electric Membership Corporation
4. Akers National Roll Company (named as National Roll)
5. North Georgia Electric Membership Corporation
6. Owen Electric Steel Company of South Carolina
7. Southern Maryland Electric Cooperative, Inc.
8. Imerys Fused Minerals Greeneville, Inc. (f/k/a Tennessee Electro Minerals, Inc.)
9. The University of North Carolina at Chapel Hill
10. Union Carbide Corporation
11. General Electric Company
12. Erachem Comilog, Inc.
13. Carr & Duff, Inc.
14. G&S Motor Equipment Co., Inc.
15. Virginia Electric and Power Company

Appendix E

Site Map



The Ward Transformer Site is located near the Raleigh Durham International Airport (RDU) in the city of Raleigh, North Carolina in a predominantly industrial area.

- Reach B
- Reach C
- Reach D
- Lower Crabtree Creek
- Lower Brier Creek
- Approximate Boundary - Operable Unit 2

August 6, 2013

Site Map

Ward Transformer
Raleigh, NC

Appendix
E

Appendix F

OU1 Record of Decision

APPENDIX F

RECORD OF DECISION

WARD TRANSFORMER SUPERFUND SITE
Operable Unit 1

Raleigh, Wake County
North Carolina



U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA, GEORGIA
September 2008



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DECLARATION FOR THE RECORD OF DECISION FOR THE WARD TRANSFORMER SUPERFUND SITE

SITE NAME AND LOCATION

Ward Transformer Superfund Site,
Raleigh, Wake County, North Carolina
Site Identification Number – NCD 003 202 603

STATEMENT OF BASIS AND PURPOSE

This decision document presents the Selected Remedy for the Ward Transformer Superfund Site (Site), Operable Unit 1 in Raleigh, Wake County, North Carolina, which was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the Administrative Record file for this Site.

The State of North Carolina concurs with the Selected Remedy.

ASSESSMENT OF THE SITE

The response action selected in this Record of Decision (ROD) for Operable Unit 1 (OU1) is necessary to protect the public health or welfare, or the environment from actual or threatened releases of hazardous substances, pollutants, or contaminants from this Site which may present an imminent and substantial endangerment to public health or welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The Selected Remedy is: Excavation and Off-Site Disposal of sediments and flood plain soil from Reaches B, C, and D, and Lower Brier Creek; Monitored Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek; and Institutional Controls. The Selected Remedy includes:

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Implement educational and community outreach programs.
- Conduct pre-excavation sampling of sediment and floodplain soil.
- Conduct a pre-excavation endangered mussel evaluation study.
- Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.
- Restore site and stream to pre-remediation conditions.

- Implement Monitor Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.
- Conduct periodic monitoring of sediment and aquatic biota.
- Implement Institutional Controls.
- Conduct Five-year reviews.

STATUTORY DETERMINATIONS

The Selected Remedy is protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

The remedy selected for this operable unit does not satisfy the statutory preference for treatment as a principal element of the remedy because of the relatively low PCB levels in areas requiring excavation and because the remedy relies on naturally occurring processes to reduce toxicity, mobility, or volume of the contaminants in other areas. In addition, the principal threat waste at the Site is being addressed through a separate time critical removal action using thermal desorption treatment.

This remedy will not result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, however, since it may take more than five years to attain levels that allow for unlimited use and unrestricted exposure a policy review will be conducted within five years of construction completion for the Site to ensure that the Selected Remedy is, protective of human health and the environment.

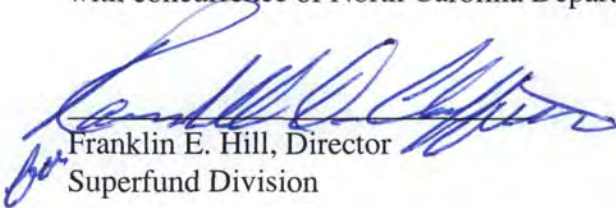
ROD DATA CERTIFICATION CHECKLIST

1	Chemicals of Concern and Their Respective Concentrations	Section 8.1.1
2	Baseline Risk Represented by the Chemicals of Concern	Section 8.1.4.1
3	Cleanup Levels Established for Chemicals of Concern and the Basis for the Levels	Section 9.1
4	Current and Future Land and Groundwater Use Assumptions Used in the Baseline Risk Assessment and the Record of Decision	Section 7.0
5	Land Use that Will be Available at the Site as a Result of the Selected Remedy	Section 13
6	Estimated Capital, Operation and Maintenance, and Total Present Worth Costs; Discount Rate; and the Number of Years Over Which the Remedy Cost Estimates are Projected	Section 13

7	Decisive Factors that Led to Selecting the Remedy	Sections 11 & 13
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AUTHORIZING SIGNATURE

This Record of Decision documents the Selected Remedy for Operable Unit 1 at the Ward Transformer Superfund Site. This remedy was selected by the Environmental Protection Agency with concurrence of North Carolina Department of Environment and Natural Resources.


Franklin E. Hill, Director
Superfund Division

9-29-08
Date

**DECISION SUMMARY
FOR THE
RECORD OF DECISION**

**WARD TRANSFORMER SUPERFUND SITE
Operable Unit 1**

Raleigh, Wake County
North Carolina



U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA, GEORGIA
September 2008

**RECORD OF DECISION
FOR THE WARD TRANSFORMER SUPERFUND SITE
DECISION SUMMARY**

1.0 SITE NAME, LOCATION, AND DESCRIPTION

The Ward Transformer Superfund Site (NCD 003 202 603) is located along Mount Herman Road, in a predominantly industrial area of northwestern Raleigh, Wake County, North Carolina. The Ward Transformer facility was built on approximately 11 acres of previously undeveloped land in 1964. As part of its operations, the Ward Transformer facility built, repaired, sold, and reconditioned transformers, switchgear, and other similar types of electrical equipment at the Site until 2006.

An EPA-lead phased remedial investigation was conducted from April 2003 to April 2007. As part of the investigation, soil, sediment, surface water, groundwater, and fish samples were collected. The investigation included the facility property and surrounding properties, together with more than 30 miles of waterways including unnamed tributaries to Little Brier Creek (Reach A, B and C), Little Brier Creek (Reach D), Brier Creek Reservoir, Brier Creek, Lake Crabtree and certain tributaries, Crabtree Creek and certain tributaries, and a 0.5 mile segment of the Neuse River (Figure 1).

In September 2005, EPA signed an Administrative Settlement Agreement and Order on Consent with a group of potentially responsible parties (PRPs) to implement a time critical removal action. The removal action is underway and includes contaminated soil/sediment removal at the Ward Transformer facility and some immediate surrounding areas, including Reach A.

Operable Unit 1, the subject of this ROD includes Reaches B, C, and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and Crabtree Creek. These areas are all downgradient from Reach A and the Ward Transformer facility.

The USEPA has the enforcement lead at the Site, with support from the North Carolina Department of Environment and Natural Resources (NC DENR). The USEPA plans to negotiate a Consent Decree with responsible parties to conduct and pay for the implementation of the remedy described in this ROD.

2.0 SITE HISTORY

The Ward Transformer facility is owned by Ward Transformer Company, Inc., and operated by Ward Transformer Sales and Service, Inc. (collectively "Ward") and was built on approximately 11 acres of previously undeveloped land in 1964. As part of its operations, Ward built, repaired, sold, and reconditioned transformers, switchgear, and other similar types of electrical equipment at the Site until 2006. As a result of Ward's operations, polychlorinated biphenyls (PCBs) were released into the environment.

The Ward Transformer Superfund Site was proposed for the National Priority List (NPL) on September 5, 2002, and was finalized on the NPL on April 30, 2003. EPA conducted a phased remedial investigation from April 2003 to April 2007. As part of the investigation, soil, sediment, surface water, groundwater, and fish samples were collected. The investigation covered the facility property and surrounding properties, together with more than 30 miles of waterways including unnamed tributaries to Little Brier Creek (Reach A, B and C), Little Brier Creek (Reach D), Brier Creek Reservoir, Brier Creek, Lake Crabtree and some tributaries, Crabtree Creek and some tributaries, and a 0.5 mile segment of the Neuse River (Figure 1).

As part of its investigation of the Site, EPA has conducted numerous enforcement-related activities including:

- On July 3, 2002, EPA sent Ward Transformer Company, Inc., an Information Request Letter pursuant to Section 104 of CERCLA seeking information as part of its investigation of the Site.
- On August 29, 2002, EPA sent Ward Transformer Company, Inc, a General Notice Letter notifying Ward of its potential liability for the release or threatened release of hazardous substances at the Site.
- In November 2003 and February 2004, EPA sent several hundred companies Information Request Letters based on information received from Ward that the companies may have conducted business with, or sent hazardous materials to, the Site.
- On September 14, 2004, EPA prepared and signed an Action Memorandum supporting EPA's decision to implement a time-critical removal at the Site.
- On October 20, 2004, EPA sent Notice/Demand letters and draft Administrative Orders on Consent (AOCs) to 43 Potentially Responsible Parties (PRPs) notifying them of their potential liability, and providing them 60 days in which to enter into an agreement to conduct or finance a time-critical removal action at the Site, pursuant to the Action Memorandum, and to reimburse EPA for its costs incurred to date. On November 8, 2004, EPA sent a fifth owner/operator PRP a Notice/Demand letter and draft AOCs. The PRPs included 39 top-volume generator PRPs as well as four owner/operator PRPs. On December 22, 2004, the negotiation period officially ended. EPA was unable to reach a settlement agreement with the PRPs for the performance of a time-critical removal action and the reimbursement of EPA's costs.
- Between February 2005 and September 2005, EPA negotiated with a group of owner/operator PRPs and generator PRPs for the performance of a time-critical removal action at the Site and the reimbursement of EPA's costs.

- On September 16, 2005, EPA entered into a DOJ-approved Administrative Settlement Agreement and Order on Consent (Settlement Agreement) with nine PRPs for the performance of a time-critical removal action at the Ward Transformer facility and some immediately surrounding areas and the reimbursement of \$725,440.83 in past response costs.
- On April 21, 2006, EPA was notified that Ward had made a decision to permanently discontinue the manufacture, repair or inventory storage of all oil-filled transformers at the Ward Transformer facility or the adjacent warehouse property.
- On June 2006, the PRPs' contractor mobilized to the Site to begin implementation of the time-critical removal action. The removal action is underway and includes contaminated soil/sediment removal from the Ward Transformer facility and some immediate surrounding areas, including Reach A followed by treatment and off-site disposal, as appropriate.

3.0 COMMUNITY PARTICIPATION

The Ward Transformer Superfund Site was included on the National Priorities List (NPL) or Superfund list in April 2003. Since 2003, EPA has conducted extensive community relations activities to inform and involve the community about Site activities. Community relations activities conducted include mailing information fact sheets and e-mails, press releases, availability sessions, sampling plan development meeting, presentations, and public meetings.

Table 1 presents a summary of community meetings conducted in Raleigh, North Carolina.

Table 1 – Community Participation

EVENT	DATE
Remedial Investigation (RI) “ Kick-off” Public meeting	March 13, 2003
RI findings meeting	November 16, 2004
Task Force Presentation	August 4, 2005
Sampling Plan Development meeting	October 27, 2005
Public Availability Session	January 19, 2006
Public Meeting	June 21, 2006
Public Availability Session	March 17, 2007
Proposed Plan Public Meeting for OU1	August 14, 2007

The OU1 RI/FS report and Proposed Plan for the Ward Transformer Superfund Site were made available to the public in August 2007. They can be found in the Administrative Record file and the information repository maintained at the EPA Docket Room located at EPA Region 4 in

Atlanta, Georgia, and at the North Regional Public Library in Raleigh, North Carolina. The notice of availability of these two documents was published in the Durham Herald on August 6, 2007, and the Raleigh News and Observer on August 8, 2007. A public comment period was held from August 6, 2007, to September 4, 2007. An extension to the public comment period was requested. As a result, the public comment period was extended to October 4, 2007. In addition, a public meeting was held on August 14, 2007, to present the proposed plan to a broader community audience than those that had already been involved at the Site. At this meeting, representatives from the EPA and the NC DENR answered questions about the Site and the remedial alternatives. EPA's response to the comments received during this period is included in the Responsiveness Summary, which is part of this Record of Decision.

4.0 SCOPE AND ROLE OF OPERABLE UNIT 1 (OU1)

As with many Superfund Sites, the problems at the Ward Transformer Superfund Site are complex. The contamination at the Site is being addressed through an on-going time critical removal action and future remedial actions. EPA has organized the remedial work into two operable units. OU 1 is the subject of this ROD, and OU 2 will be the subject of a future ROD.

On-going Time Critical Removal Action:

On June 2007 the contractor for the potentially responsible parties (PRPs) mobilized to the Site to initiate a removal action that addresses the main source of PCB contamination. The removal action includes excavation and removal of contaminated soil and sediment from the Ward Transformer Facility and immediate surrounding areas including Reach A. The on-going removal action is scheduled to be completed in 2009. When completed, it is estimated that more than 150,000 tons of contaminated material would be addressed either by on-site Low Temperature Thermal Desorption (LTTD) treatment or off-site disposal, as appropriate.

Future Remedial Actions:

Operable Unit 1(OU1)

OU 1 is the subject of this ROD and addresses soil, sediment, surface water and fish on areas downgradient from the Ward Transformer facility including Reaches B, C and D; Brier Creek Reservoir; Lake Crabtree; and Lower Crabtree Creek. (Figure 1)

Operable Unit 2 (OU2)

Is a future ROD that will include the final remedy for all media; at the Ward Transformer facility, certain parcels adjacent to the facility, and nearby drainage pathways upgradient of Reach B.

5.0 SITE CHARACTERISTICS

5.1 Site Settings

The Ward Transformer facility was built on approximately 11 acres of previously undeveloped land in 1964. As part of its operations, Ward built, repaired, sold, and reconditioned transformers, switchgear, and other similar types of electrical equipment at the Site until 2006. The Ward Transformer facility operations included the main building, where transformers were handled and offices were located, the transformer storage yard, a storm-water management lagoon, and a building housing a storm-water treatment plant (SWTP) system. Treated effluent from the SWTP was discharged to a National Pollutant Discharge Elimination System (NPDES)-permitted outfall on an unnamed tributary to Little Brier Creek (Reach A), located west of the lagoon area (Figure 2). The northern portion of the Site, a warehouse that was formerly part of the Ward operations, was later leased to Horizon Forest Products (Horizon) circa 1976 to 2002, a lumber supply business and is now vacant.

The Ward Transformer facility is located 600 feet (ft) south-southeast of the Northern Wake Expressway/Interstate-540 (I-540), 1,000 ft southwest of US highway 70, and is adjacent to property owned by the Raleigh-Durham International (RDU) Airport. The RDU Airport proper (i.e., terminals) is located approximately 2 miles south of the Site, with airport runways located less than 1 mile south. Estes Transport Co., a trucking company, leases the property to the south (Figure 3). Across Mount Herman Road from the facility is Triangle Coatings where plastic and metal parts are painted. Visara International, Inc. is also across Mount Herman Road.

5.2 Climate

The Raleigh-Durham area receives an average of 42.5 inches of precipitation annually, based on measurements collected at RDU Airport between 1948 and 2005. Rainfall is well distributed throughout the year. July (4.6 inches) and August (4.5 inches) have the greatest amount of rainfall, and October (3.0 inches) and November (2.9 inches) the least. Soil moisture is sometimes low during spring and summer due to gaps between rain events rather than from a shortage of total rainfall, but occasionally the accumulated total during the growing season falls short of plant needs. Most summer rain is produced by thunderstorms, which may occasionally be accompanied by strong winds, intense rains, and hail. Tropical storm systems periodically impact the Raleigh-Durham area, with the largest storms producing 4 to 5.6 inches of rainfall in a 24-hour period. Storms of this nature typically result in flash flooding in the Crabtree Creek watershed. However, the Raleigh-Durham area is far enough from the coast such that the severe weather effects of coastal storms are reduced. While snow and sleet usually occur each year, significant accumulations of snow are rare.

5.3 Local Soils

The soil descriptions and maps in the U.S. Department of Agriculture (USDA) Soil Conservation

Service (SCS) Soil Survey for Wake County, NC (SCS, 1970) were reviewed. The following narrative summarizes characteristics of soils occurring within areas potentially impacted by releases from the Ward Transformer Superfund Site. Soils within the vicinity of the Site and the riparian area associated with the watershed below the facility are described by the Chewacla and Congaree soil series.

Soils in Reaches B and C are described as soils from the Chewacla series of 0 to 2% slopes. This soil consists of nearly level, poorly drained soils on the floodplain. It is formed from alluvial deposits of fine loamy material. Fertility and organic material are low and permeability is moderately rapid. It has a seasonally high water table and frequent flooding occurs for brief periods of time.

Throughout the lower portion of the study area, encompassing Little Brier Creek through Brier Creek Reservoir down to Lake Crabtree, Chewacla soils occur with Congaree soils. Congaree soils have a higher rate of permeability and tend to be better drained. Soils of the Congaree series consist of nearly level, well-drained soils on the floodplains. Typically, they have a brown to dark-brown surface layer that is 4 to 12 inches thick. Beneath the surface layer, the soil material is silt loam that ranges from brown to dark brown in color and from 30 to 108 inches in total thickness. Like the Chewacla series, these soils have a seasonally high water table, low organic matter and fertility, and permeability is moderately rapid. These soils are also subject to frequent flooding for brief periods of time.

5.4 Surface Water

The Ward Transformer facility is located in the Crabtree Creek drainage basin, a subbasin of the 2,405-square mile (mi²) Upper Neuse Basin (hydrologic unit code [HUC] No. 03020201). The Upper Neuse Basin is a subbasin of the 6,234-mi² Neuse River Basin. The headwaters of the Neuse River originate at the confluence of the Eno and Flat Rivers, northwest of Durham, and feed into Falls of the Neuse Lake (Falls Lake Reservoir), which was created by the construction of Falls Lake dam in 1983. After this impounded 22-mile beginning, the Neuse River flows freely as a freshwater river until it reaches New Bern, North Carolina. In the vicinity of New Bern, the river turns brackish, widens, and travels sluggishly as it becomes a 40-mile-long tidal estuary that empties into the southern end of Pamlico Sound.

The Ward Transformer facility is located on a topographic high and on the edge of the local watershed. The facility is located outside the 500-year floodplain. In general, the topography of the property slopes to the west-southwest. Prior to 1972, all runoff from the Ward Transformer facility flowed overland or was carried in drainage ditches to intermittent streams located west and southwest of the facility. One of the streams receiving runoff from the facility included an unnamed tributary to Little Brier Creek (Reach A), located west of the on-site lagoons. Some of the facility's runoff also entered a drainage ditch located along the northern side of the property, adjacent to the transformer storage yard. This drainage ditch conveyed runoff westerly and generally followed a dirt road located west of the facility. Some runoff from the facility may have

also flowed overland northwesterly into an intermittent stream, which also flowed to the west. In 1971, two lagoons were created on the southern portion of the Ward property for retention of stormwater runoff. The upper lagoon had a pipe from the bottom that drained to the lower lagoon. The lower lagoon then had a pipe from the bottom that drained to the unnamed tributary to Little Brier Creek located west of the lagoons (Reach A).

Around 1979, a concrete curb was built around the perimeter of the facility pad for the purpose of directing all stormwater runoff into the on-site lagoons. At approximately the same time, the storm water treatment plant (SWTP) system was installed in a building located north of the lagoons. Runoff collected in the pond was pumped to the SWTP for treatment prior to discharge via the NPDES-permitted outfall located at the beginning of Reach A. No detectable concentrations of PCBs were allowed in the treated effluent. Effluent was also monitored for total chloride, total iron, total fluoride, total phosphorus, total nitrogen, and oil and grease.

From the SWTP outfall, surface water flows west-southwesterly via the unnamed tributary to Little Brier Creek for approximately 2,100 ft (0.4 mile) before entering the first culvert beneath the first I-540 crossing. This section of the downstream surface water pathway will hereafter be referred to as Reach A in this report. Upon exiting the culvert on the west side of I-540, the unnamed tributary to Little Brier Creek continues to flow west-southwesterly for approximately 1,500 ft (0.3 mile) before entering a culvert beneath the Lumley Road crossing. Several tributaries feed into this portion of the unnamed tributary to Little Brier Creek. This section of the downstream surface water pathway will hereafter be referred to as Reach B. From the terminus of Reach B, the unnamed tributary to Little Brier Creek conveys surface water south-southwesterly for approximately 2,100 ft (0.4 mile) to its confluence with Little Brier Creek proper and a culvert beneath the second I-540 crossing. This section of the downstream surface water pathway will hereafter be referred to as Reach C. From the culvert beneath the second I-540 crossing, Little Brier Creek flows southerly for approximately 4,200 ft (0.8 mile) to its mouth on Brier Creek Reservoir, located in the vicinity of the culverts beneath the Globe Road crossing. This section of the downstream surface water pathway will hereafter be referred to as Reach D.

From Little Brier Creek's mouth, Brier Creek Reservoir carries surface water southerly for approximately 1.7 miles, flowing through culverts at Globe Road, Nelson Road, and Aviation Parkway to the reservoir's dam. Brier Creek Reservoir is not used as a source for drinking water; it is one of several impoundments in the Crabtree Creek drainage basin constructed primarily for flood control. Brier Creek Reservoir covers an area of approximately 150 acres during normal (not flood stage) conditions. Brier Creek Reservoir Dam was completed in 1985. In addition to Little Brier Creek, Brier Creek is a tributary of Brier Creek Reservoir.

From the Brier Creek Reservoir Dam, surface water is discharged through an outlet structure to lower Brier Creek, which flows southerly for approximately 1.8 miles, flowing through culverts at Airport Boulevard and I-40, to its mouth on Lake Crabtree, an impoundment structure constructed in 1988 primarily for flood control. Lake Crabtree currently covers an area of

approximately 460 acres under normal conditions. Figure 4 illustrates the locations of Reaches A through D, as well as water bodies located farther downstream, discussed above.

Additional tributaries to Lake Crabtree include Stirrup Iron Creek, Crabtree Creek, Haley's Branch, and Black Creek, which drains portions of Cary, Morrisville, and the RDU Airport. From Brier Creek's mouth, Lake Crabtree conveys surface water flow easterly, through a culvert at Aviation Parkway, to the lake's dam and an outlet structure. Water is discharged through the outlet structure to lower Crabtree Creek, which in turn flows east-southeasterly for approximately 11 miles before spilling over the Lassiter Mill Dam, a former mill pond dam constructed in the early 1900s. The Lassiter Mill Dam is approximately 7 ft high and 200 ft wide. From the Lassiter Mill Dam spillway, Crabtree Creek continues to flow southeasterly for approximately 10.5 miles before discharging into the Neuse River north of Poole Road. Tributaries to Crabtree Creek between Lake Crabtree and the Neuse River include Reedy Creek, Sycamore Creek, Turkey Creek, Haresnipe Creek, Richland Creek, Mine Creek, Beaverdam Creek, Big Branch, Pigeon House, and Marsh Creek. (Figure 1)

Table 2 summarizes the surface water bodies located downstream of the Ward Transformer facility included in the RI/FS study area for OU1.

Table 2 - Downstream Surface Water Bodies

SURFACE WATER BODY		LENGTH OF REACH (MILES)
Unnamed Tributary to Little Brier Creek	Reach A	0.4
	Reach B	0.3
	Reach C	0.4
Little Brier Creek proper	Reach D	0.8
Brier Creek Reservoir		1.7
Brier Creek		1.8
Lake Crabtree Tributaries include Stirrup Iron Creek, Upper Crabtree Creek, Black Creek, and Haleys Branch		1.5
Crabtree Creek (entire watershed) Tributaries include Reedy Creek, Sycamore Creek, Turkey Creek, Haresnipe Creek, Richland Creek, Mine Creek, Beaverdam Creek, Big Branch, Pigeon House, and Marsh Creek		21.5
Neuse River		230*

*From its confluence with Crabtree Creek, the Neuse River flows southeasterly for approximately 230 miles to its mouth on Pamlico Sound. The downstream study area included an approximate 0.5-mile length of reach of the Neuse River. This length of reach included the Neuse River at its confluence with Crabtree Creek to approximately 0.5 mile downstream.

In general, the RI/FS downstream study area terminus was located in the Neuse River, approximately 0.5 mile downstream of Crabtree Creek's mouth. Figure 1 shows the downstream study area from the Ward Transformer facility to the Neuse River. Municipalities located along the downstream study area include the City of Raleigh and the Towns of Morrisville and Cary.

Little Brier Creek, Brier Creek Reservoir, and Brier Creek are designated by NC DENR as Class C waterways for the entire length of these reaches. Class C waterways are protected for secondary recreation, fishing, wildlife, fish and aquatic life propagation and survival, agriculture, and other uses. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner. Lake Crabtree and Crabtree Creek to its confluence with Richland Creek (approximately 3 miles downstream of Lake Crabtree) are designated as Class B waterways.

Class B waterways are used for primary recreation and other uses suitable for Class C. Primary recreational activities include swimming, skin diving, water skiing, and similar uses involving human body contact with water where such activities take place in an organized manner or on a frequent basis. Downstream from the mouth of Richland Creek, Crabtree Creek and the 0.5-mile portion of the Neuse River are designated as Class C waterways. All downstream surface water bodies from the Ward Transformer facility are further designated as nutrient sensitive waters (NSW). This classification is intended for waters needing additional nutrient management due to their being subject to excessive growth of microscopic or macroscopic vegetation.

The unnamed tributary to Little Brier Creek originates at the facility and descends through moderate to steep topography into Little Brier Creek proper. Relatively little sediment deposition occurs along these reaches. The water in these reaches is turbid, primarily as a result of the area's soil and geology, although a significant amount of suburban development is occurring in the Little Brier Creek watershed, which is likely contributing to the sediment load in these reaches. Approaching Brier Creek Reservoir, Little Brier Creek loses energy and flow changes from a river environment to a lake environment. As the transition from river to lake occurs, energy gradients, bottom shear stresses, and turbulence levels all decrease, resulting in high rates of sediment deposition. This is evident by the occurrence of sand and silt deltas forming in the area of Little Brier Creek's mouth. Brier Creek Reservoir is also exhibiting sediment deposition in the vicinity of its dam structure. At the time of construction, Brier Creek Reservoir had a maximum depth of 16.5 ft under normal conditions, a flood stage area of 385 acres, and total flood storage of 3,190 acre-ft. However, since that time, sediment accumulation has occurred. Depth of water in Brier Creek Reservoir was 4 feet, 6 feet, and 3 feet, as measured during the RI at three different locations.

From Brier Creek Reservoir, the energy and flow change from a lake to a river environment again, as lower Brier Creek carries surface water toward Lake Crabtree. Upon entering Lake Crabtree, however, the flow environment again changes from a river to a lake, and sedimentation rates increase in the vicinity of lower Brier Creek's mouth. This area is characterized by very shallow water and fine sediments. The water continues to have a distinctly muddy appearance.

Several additional tributaries, including Stirrup Iron Creek, feed into this portion of Lake Crabtree.

At the time of construction, Lake Crabtree had a maximum depth of 16 ft at normal pool, a flood stage area of 1,114 acres, and total flood storage of 6,915 acre-ft (Woodruff, 2006). However, since that time, sediment accumulation has occurred. More recent measurements reveal Lake Crabtree has an average depth of 6.5 ft with a maximum depth of approximately 13 ft. In several areas of the lake, especially in the area of the lake's tributaries and upstream of the lake's dam structure, large amounts of sediment deposition can be observed. The sediment loading to the lake is likely attributable to the substantial suburban development occurring in the Lake Crabtree watershed.

During normal operations and considering an average rainfall event, up to 83% and 95% of the total suspended solids (TSS) that enter Lake Crabtree and Brier Creek Reservoir, respectively, settle out as sediments during the time it takes for the surface water to circulate through the impoundments (City of Raleigh).

The geomorphology of the downstream reaches changes significantly with distance from the Ward Transformer facility. The beginning of Reach A near the facility has a bank full width of 2 ft and a bank full depth of approximately 0.5 ft. Approximately 21 miles downstream of the facility along Crabtree Creek at Route 1, the bank full width is 56 ft and the bank full depth is 4.5 ft (CH2MHill, 2001, revised 2002).

6.0 NATURE AND EXTENT OF CONTAMINATION

This section presents a summary of the OU1 Remedial Investigation (RI) conducted at the Site. The RI report presents more details of the investigation and results. The RI report is part of the administrative record for the Site.

6.1 Main Source of PCB Contamination

The main source of contamination is located at the Ward Transformer facility and on some of the immediate surrounding properties including Reach A. This source is being addressed under a PRP lead time-critical removal action. This action includes a combination of soil/sediment excavation follow by on-site treatment using a Low Temperature Thermal desorption process, or off-site disposal, as appropriate. Analytical data collected as part of the removal action activities show that some of these areas contain the highest levels of PCBs detected in soil (13,000 mg/kg in subsurface soil).

Because these areas are being addressed under a separate action and agreement, they are not part of OU1, and therefore, are not discussed in much detail in this ROD.

6.2 Groundwater

Groundwater at the Ward Transformer facility occurs in fractured bedrock at approximately 5 to 7 ft below ground surface (bgs) in some areas. The groundwater beneath the facility flows predominantly to the west with some localized flow to the northwest and southwest following the site topography. Groundwater in the area generally discharges to local streams, so the facility groundwater most likely moves westward and discharges into the unnamed tributary to Little Brier Creek.

No drinking water supply surface water intakes are located along the creeks or the Neuse River in the downstream study area. The nearest public drinking water supply surface water intake is located on the Neuse River, approximately 50 miles downstream of the Ward Transformer facility, and operated by the Johnston County Water System. According to Johnston County Water System officials, PCBs have not been detected in any drinking water samples collected at the water treatment plant since the facility began operating in 1996.

The primary water supply for Raleigh is Falls Lake, which is a surface water reservoir in the Neuse River above the Crabtree Creek watershed. Similarly, the City of Durham is primarily served by surface water intakes on Lake Michie and the Little River Reservoir, and the Town of Cary and Town of Morrisville are served by a surface water intake on the B. Everett Jordan Reservoir, more commonly known as Jordan Lake. None of these surface water bodies are located downstream of the Ward Transformer facility.

The nearest groundwater public water system (PWS) to the Ward Transformer facility consists of five groundwater wells (Well Nos. 1, 2, 3, 5, and 6) operated by the Angus Barn (a restaurant), located approximately 0.5 miles east of the facility in the Sycamore Creek watershed. No additional groundwater public water systems are located within a 1.0-mile radius of the Ward Transformer facility. The nearest community water system utilizing a groundwater source is the Country Ridge subdivision, located approximately 2.8 miles east-southeast of the facility. The nearest transient, non-community groundwater drinking water system is the Bass Brothers/Triangle Golf Center, located approximately 1.5 miles northeast of the Ward Transformer facility.

All of these water systems are upgradient of the Ward Transformer facility (where the groundwater flows to the west-southwest) and outside the Little Brier Creek watershed. No public drinking water supply wells were located downgradient (west-southwest) of the facility within a 4-mile radius.

Based on information from the Wake County Environmental Services and NC DENR's Groundwater Protection Unit, as well as a review of land use and zoning records, no private drinking water supply wells are located within 1.0-mile downgradient (west-southwest) of the Ward Transformer facility.

As part of the investigation groundwater monitoring wells were installed on site and sampled. Additional information is needed before remedial alternatives can be developed and a remedy is proposed. The additional groundwater work will be conducted as part of OU2. Therefore this OU1 ROD does not discuss groundwater any further.

6.3 Surface Water

The following subsections describe the various surface water sampling activities that were conducted as part of the investigation.

6.3.1 Surface Water Investigation

In May 2003, a surface water investigation was conducted in the unnamed tributary to Little Brier Creek to determine if site contaminants have impacted the local surface water quality. Surface water sampling was conducted in the unnamed tributary to Little Brier Creek from the Ward Transformer facility's stormwater lagoon outfall to the confluence of Little Brier Creek proper (Reaches A, B, and C).

In December 2005, additional surface water samples were collected from the unnamed tributary to Little Brier Creek between the stormwater lagoon outfall and Northern Wake Expressway/I-540 (Reach A) to confirm previous (i.e., May 2003) surface water sampling results and further characterize potential human health and ecological risk associated with site-related contaminants.

In February 2006, in response to concerns expressed by the local community/stakeholders, surface water samples were collected from Lake Crabtree to refine the estimated extent and magnitude of site-related contaminants

6.3.2 Surface Water - Results Summary

Downstream sampling results indicated PCB contamination, specifically Aroclor 1260, at several locations in Reach A, immediately downstream of the Ward Transformer facility, at concentrations exceeding the NC DENR Surface Water Quality Standard (SWQS) human health and aquatic life standards. The highest concentration of PCB Aroclor 1260 (0.0015 mg/L) was detected just below the SWTP's outfall where the treated stormwater lagoon water is discharged into Reach A of the unnamed tributary to Little Brier Creek. However, no PCB Aroclors or congeners were detected in surface water samples collected from Reach B or any other locations further downstream, including Lake Crabtree, where multiple surface water samples were collected. Therefore, no PCBs were detected in surface water within the OU1 areas.

6.4 Sediment and Stream Banks

The following subsections describe the various sediment sampling activities that were conducted as part of the investigation.

6.4.1 Sampling

In May 2003, a sediment investigation was conducted to assess the extent of site-related contamination in the unnamed tributary to Little Brier Creek. Sediment samples were collected across the stream width, from midstream and bank side locations, along the unnamed tributary to Little Brier Creek between the Ward Transformer facility's stormwater lagoon outfall and the confluence of Little Brier Creek proper (Reaches A, B, and C). The midstream samples were collected from underwater, but the bank samples were collected from the sediments just above the surface water level in the sides of the stream banks. Samples were attempted at depth intervals of 0 to 6 inches and 6 to 12 inches, where possible. However sediment samples from depths of 6 to 12 inches were not obtained at all sample locations due to refusal.

In November 2003, based on the analytical results of the sediment sampling activities described above identifying PCBs in the sediment, additional sediment samples were collected from Little Brier Creek proper at the culvert crossing beneath Northern Wake Expressway/I-540 downstream to Lake Crabtree. The additional sediment investigation was conducted to estimate the extent of site-related contamination in the following surface water bodies: Little Brier Creek, Brier Creek Reservoir, Brier Creek, and Lake Crabtree. In addition to the new sampling locations described above, specific May 2003 sediment sample locations were sampled to deeper depths in November 2003 because many of the sediment samples collected from Reaches A, B, and C of the unnamed tributary to Little Brier Creek in May 2003 contained PCB contamination in the deepest sample collected. This additional sampling was conducted to determine the vertical extent of PCB contamination in order to evaluate potential remedial approaches and costs. The additional samples were collected beneath the locations of the midstream and bank samples that were collected across the stream width during the May 2003 sampling that contained the highest PCB concentrations.

Following the completion of the September 2004 RI and Baseline Human Health Risk Assessment (BHHRA) Reports, it was determined that additional environmental investigation activities were warranted in the vicinity of the Ward Transformer Site. As a result, in October 2004, sediment samples were collected from tributary streams to Lake Crabtree in order to assess background conditions and to identify other potential contaminant sources. One sediment sample was collected from one location on each of the following Lake Crabtree tributary streams: Stirrup Iron Creek, Crabtree Creek, upstream of Lake Crabtree, Black Creek, and Haley's Branch. In addition, in order to further assess the extent of sediment contamination downstream from the Ward Transformer facility, sediment samples were collected from Crabtree Creek between Lake Crabtree and the eastern edge of Umstead Park.

In November 2004, because fish samples collected from Lake Crabtree (discussed below) contained concentrations of PCBs that prompted fish consumption advisories by the State of North Carolina, additional sediment samples were collected from Lake Crabtree in order to further refine the estimated extent and magnitude of site-related contaminants.

In December 2005, based on input from the local community/stakeholders, additional sediment sampling was performed in the unnamed tributary to Little Brier Creek between the Ward Transformer facility's stormwater lagoon outfall and the culvert beneath the Northern Wake Expressway/I-540 crossing (Reach A) in order to further characterize potential human health and ecological risk associated with site-related contaminants.

In February and March 2006, in response to concerns expressed by the local community/stakeholders, additional sediment samples were collected at previously sampled locations downstream from the Ward Transformer facility, as well as from new locations further downstream. The locations include Reach D; the vicinity of the relic Little Brier Creek and Brier Creek stream channel/floodplain now submerged in Brier Creek Reservoir; Brier Creek, upstream of its confluence with Lake Crabtree; the vicinity of the relic Brier Creek and Crabtree Creek stream channel/floodplain now submerged in Lake Crabtree; the vicinity of the Lake Crabtree shoreline; Crabtree Creek, upstream and downstream of Lake Crabtree; two tributary streams to Crabtree Creek, Richland Creek, and Mine Creek; the Neuse River, upstream and downstream of its confluence with Crabtree Creek. Sediment samples were collected at the above locations from multiple depth intervals, with a maximum sample depth of 3.5 ft. Some of the targeted depth intervals were not achievable due to refusal.

6.4.2 Sediment and Stream Banks – Results Summary

Sediment sampling results are shown in Figures 5 through 10. A summary of the maximum PCB concentration detected in the OU1 study areas is summarized in Table 3.

Table 3 - Sediment, Maximum Concentrations

LOCATION	AROCLOR MAXIMUM CONCENTRATION (mg/kg)
Reach A	380
Reach B	3.0
Reach C	2.6
Reach D	4.2
Brier Creek Reservoir	0.31
Brier Creek	0.28
Lake Crabtree Sector A	0.48
Lake Crabtree Sector B	0.18
Lake Crabtree Sector C	0.041
Crabtree Creek	Not detected
Neuse River	Not detected
Stirrup Iron Creek	Not detected
Upper Crabtree Creek	Not detected
Black Creek	Not detected
Haleys Branch	Not detected
Richland Creek	Not detected
Mine Creek	Not detected
Upper Neuse River	Not detected

6.5 Floodplain Soil

The following subsections describe floodplain soil sampling conducted as part of the investigation of the OU1 areas. Most of the floodplain soil data was collected from Reach A which is the study area closest to the source. Reach A is being addressed as part of the removal action, and is not part of OU1. As part of the removal action, floodplain soil from Reach A is being removed to levels below 1 mg/kg.

6.5.1 Sampling

In February and March 2006, soil samples were collected from the floodplain of surface water bodies downstream of the Ward Transformer facility. The soil samples were collected to determine if floodplain soils have been impacted by site-related contaminants and if they contained PCB concentrations that may pose an unacceptable risk to human health and/or ecological receptors. Sample locations targeted relatively high-use recreational areas (e.g., fishing, hiking, biking, athletic fields, etc.) of the Brier Creek Reservoir and Lake Crabtree floodplain, focusing on potential depositional areas where contaminants would tend to accumulate.

Soil samples were collected from the floodplain area at Lake Crabtree County Park, including the following:

- Open Play area, located adjacent to the Water Wise Garden, volleyball courts, and parking area.
- Vicinity of the boat-rental/beach area.
- Public boat ramp area.
- Car-top boat launching area.
- Areas used for biking, recreational shoreline fishing, and walking/hiking. Specifically, in the vicinity of Lake Crabtree County Park's Lake Trail, the Lake Crabtree Dam's spillway, and the Black Creek Greenway.
- Lake Crabtree floodplain along its southern shoreline.
- Upstream of Lake Crabtree, at an athletic field at the Cedar Fork District Park.

6.5.2 Floodplain Soil - Results Summary

Floodplain soil sampling results are shown in Figures 5 to 9.

Table 4 summarizes the floodplain soil results for PCB Aroclor 1260 analyses.

Table 4 – Floodplain Soil Maximum Aroclor Concentrations

LOCATION	CONCENTRATION (mg/kg)
Reach A (outside floodplain soils)	380
Reach A	1.1
Reach B	Not sampled
Reach C	Not sampled
Reach D	0.048
Brier Creek Reservoir	0.048
Brier Creek	Not sampled
Lake Crabtree	Not detected
Upper Crabtree Creek	Not detected
Crabtree Creek	Not detected

6.6 Crayfish and Fish Tissue

In order to characterize potential human health and ecological risk associated with uptake of PCBs by aquatic biota, fish samples were collected from surface water bodies located downstream from the Ward Transformer facility. Prior to sampling, a Scientific Collection Permit (SCP) was obtained from the North Carolina Wildlife Resources Commission (NCWRC). Collection activities were performed in accordance with the requirements of the SCP. Contaminant concentration data from whole body composite samples were collected for assessing risk to potential ecological receptors, such as piscivorous mammals or birds. Contaminant concentration data from fish filet composite samples were collected for assessing risk to potential human receptors.

6.6.1 Sampling

May 2003 Sampling – Reach B and Brier Creek Reservoir

In May 2003, aquatic biota sampling was performed in Reach B of the unnamed tributary to Little Brier Creek. The sampling area in Reach B was located approximately 0.5 miles downstream of the Ward Transformer facility's stormwater lagoon outfall, and included Reach B's initial 0.15-mile length downstream of the Northern Wake Expressway/I-540. Target fish species established for the creek sampling included cyprinid minnows or small centrarchids (sunfish). However, cyprinid minnows were not dominant components of the biota in the creek. Because crayfish were abundant in the creek and are a preferred prey for raccoons and piscivorous birds, crayfish were sampled in lieu of cyprinids. In addition, pumpkinseed sunfish and yellow bullhead were collected. Whole body composite samples were prepared from crayfish, pumpkinseed sunfish, and yellow bullhead. All aquatic biota were collected in Reach B using a backpack-mounted electrofisher.

Also in May 2003, fish samples were collected from Brier Creek Reservoir. In order to determine whether spatial differences in fish tissue concentrations were present, three areas were operationally defined based on reservoir morphology. The upper portion of Brier Creek

Reservoir was considered to extend from the last free-flowing location in Little Brier Creek approximately 0.2 mile downstream to the twin culverts beneath the Globe Road crossing (i.e., 0.2-mile downstream section of Reach D). The middle (downgradient) portion of Brier Creek Reservoir was considered to extend from the culverts beneath the Globe Road crossing approximately 0.45 mile downstream to the culverts beneath the Nelson Road crossing. The lower portion of Brier Creek Reservoir was considered to extend from the Nelson Road crossing, downstream to the Aviation Parkway crossing, and then downstream to the breast of the dam that forms Brier Creek Reservoir, a total length of approximately 1.2 miles.

Fish samples were collected from Brier Creek Reservoir using two different gear types. A boat-mounted Coffelt electrofisher was used to collect largemouth bass (*Micropterus salmoides*) and bluegill sunfish (*Lepomis macrochirus*) specimens. Brown bullheads (*Ameiurus nebulosus*) were collected by trotlining. A total of three discrete locations were selected for individual trotline sets and captured target fish specimens were segregated by location. Trotline No. 1 was located in the upper portion of the Brier Creek Reservoir sampling reach, and Trotlines No. 2 and No. 3 were located in the middle portion of the Brier Creek Reservoir sampling reach. Largemouth bass and bluegill sunfish specimens retained for tissue analyses were also segregated by capture locations defined as the upper Brier Creek Reservoir and middle Brier Creek Reservoir. Three whole body composite samples were prepared from bluegill sunfish collected from Brier Creek Reservoir. Three filet tissue composite samples each were prepared from bluegill sunfish, largemouth bass, and brown bullheads from Brier Creek Reservoir.

November 2003 Sampling – Brier Creek Reservoir, Brier Creek, and Lake Crabtree

In November 2003, additional fish tissue samples were collected in the lower portion of Brier Creek Reservoir (downstream of Nelson Road), Brier Creek (between Brier Creek Reservoir and Lake Crabtree) and Lake Crabtree (from three areas) to determine the downstream extent of fish contamination.

In the lower portion of Brier Creek Reservoir (downstream of Nelson Road), composite whole body samples of bluegill sunfish and green sunfish were collected for assessing risk to potential ecological receptors such as piscivorous mammals or birds. In addition, four composite samples consisting of three to five fish each were collected for assessing potential human health risk to recreational fisherman. These included filet tissue samples obtained from brown bullhead, yellow bullhead, bluegill sunfish, and largemouth bass. Scaled, skin-on filet tissue samples were prepared from the individual fish. One composite sample was prepared from each of these groups.

Three composite samples were collected in Brier Creek, between Brier Creek Reservoir and Lake Crabtree, for assessing risk to potential ecological receptors such as piscivorous mammals or birds. Whole body tissue samples were prepared from crayfish, yellow bullhead, and bluegill sunfish.

Three composite samples of whole body bluegill sunfish were collected from Lake Crabtree for assessing risk to potential ecological receptors such as piscivorous mammals or birds. Composite samples were collected to represent the northern (Sector A), western (Sector B), and eastern (Sector C) portions of Lake Crabtree. In addition, ten composite samples consisting of three to five fish each were collected from Lake Crabtree for assessing potential human health risk to recreational fishermen. In addition to the target species of largemouth bass and bluegill sunfish from the May 2003 sampling event, carp were also targeted as requested by NC DENR. Carp species are popular among local fishermen in the area for both sport and as table fare. Because Lake Crabtree has been actively managed by the state as a large catfish fishery, channel catfish (*Ictalurus nebulosus*) were sampled in lieu of brown bullhead. Scaled, skin-on filet tissue samples (skin-off for catfish species) were prepared from the individual fish. Fish collection techniques in Brier Creek Reservoir and Lake Crabtree consisted of boat-mounted electrofishing gear and trotlining. Fish collection techniques in Brier Creek consisted of backpack-mounted electrofishing.

November 2004 Sampling – Lake Crabtree and Crabtree Creek

In November 2004, additional fish sampling was performed in Lake Crabtree and Crabtree Creek (downstream of Lake Crabtree) because fish from the most distant downstream locations sampled (in Lake Crabtree) contained concentrations of PCBs that prompted fish consumption advisories by the State of North Carolina.

Additional whole body samples were collected from Lake Crabtree for assessing risk to potential ecological receptors such as piscivorous mammals or birds. In order to determine whether spatial differences in fish tissue concentrations were present, sample collection was performed in Sectors B and C of Lake Crabtree. Two whole body samples were prepared from Sector B; one sample was comprised of one largemouth bass (*Micropterus salmoides*) and the other sample was comprised of one channel catfish (*Ictalurus punctatus*). Two whole body samples were prepared from Sector C; one sample was comprised of one largemouth bass and the other sample was comprised of one channel catfish. Sampling was performed using two different gear types. A boat-mounted Coffelt electrofisher was used to collect largemouth bass specimens and channel catfish were collected by trotlining. Largemouth bass and channel catfish specimens retained for tissue analyses were segregated by capture locations within Sectors B and C of Lake Crabtree.

Three approximately 1,000-ft long reaches within an approximately 5-mile long span of Crabtree Creek were targeted for fish sampling. Targeted fish for the Crabtree Creek sampling were to be comparable to the targeted fish from previous sampling efforts at locations in Brier Creek Reservoir and the portion of the unnamed tributary to Little Brier Creek closer to the Ward Transformer facility (i.e., Reach B). However, because the dominant members of Crabtree Creek's fish community varied between the three sampling reaches, alternative species from the same trophic levels were substituted. Species collected by electrofishing in Crabtree Creek between Lake Crabtree and I-40 included pumpkinseed sunfish, bluegill sunfish, and channel catfish. The sampling reaches in Crabtree Creek located at Umstead State Park, downstream of the Company Mill Crossing trail and upstream of Ebenezer Church Road, yielded redbreast

sunfish (*Lepomis auritus*), bluegill sunfish, and yellow bullhead. Whole body composite samples were prepared from pumpkinseed sunfish, bluegill sunfish, channel catfish, redbreast sunfish, and yellow bullhead. Filet tissue composite samples were prepared from pumpkinseed sunfish, bluegill sunfish, channel catfish, and redbreast sunfish. Composite filet tissue samples of the sunfish species were each comprised of scaled, skin-on filets. Channel catfish composite samples were skinned filets. Sampling in Crabtree Creek was performed using a backpack-mounted electrofisher.

August 2005 Sampling – Crabtree Creek

In August 2005, the NC DENR's Division of Water Quality (NCDWQ) collected eight composite fish samples from Crabtree Creek, downstream of Lake Crabtree, for assessing potential human health risk to recreational fishermen. Four discrete sample locations along Crabtree Creek were targeted and included the creek's crossing at the following: Company Mill trail, located within William B. Umstead State Park; Duraleigh Road Bridge; Crabtree Valley Mall near the Homewood Banks Drive Bridge; and Wake Forest Road Bridge.

The samples consisted of four to seven fish each and included filet tissue samples obtained from largemouth bass, channel catfish, and flathead catfish. Scaled, skin-on filet tissue samples (skin-off for catfish species) were prepared from the individual fish. Sampling in Crabtree Creek was performed using a backpack-mounted electrofisher.

February and March 2006 Sampling – Brier Creek Reservoir

Whole body fish sampling from middle and lower Brier Creek Reservoir was performed in February and March 2006 in order to reduce uncertainties in the ecological risk assessment for the Ward Transformer Superfund Site. The subsequent data were primarily used to better evaluate the risks to bald eagles and other carnivorous raptors that use Brier Creek Reservoir for foraging. One whole body composite sample consisting of five fish was collected from yellow bullhead (*Ameiurus natalis*). In addition, due to sufficient body mass, three whole body grab samples were collected from largemouth bass (*Micropterus salmoides*). Sampling in Brier Creek Reservoir in February and March 2006 was performed using two different gear types. A boat-mounted Coffelt electrofisher was used to collect largemouth bass specimens, and yellow bullhead specimens were collected by trotlining.

6.6.2 Crayfish and Fish Tissue – Results Summary

Aquatic biota (fish and crayfish) were collected downstream of the Ward Transformer facility. Whole body samples were collected in Reach B, Brier Creek Reservoir, Brier Creek, Lake Crabtree, and Crabtree Creek for evaluating potential risk to ecological receptors. Fish filet tissue samples were collected from Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek to assess potential impacts to humans from fish consumption.

Samples of aquatic biota collected from downstream water bodies showed the presence of site contaminants. Crayfish and whole body fish samples (pumpkinseed sunfish and yellow bullhead) collected from Reach B contained significant concentrations of Aroclor 1260 and various PCB congeners and dioxins/furans. Sampling results are presented in Figures 11 and 12.

The highest concentrations were found in a whole body pumpkinseed sunfish sample from Reach B, with an Aroclor 1260 concentration of 75 mg/kg and a combined PCB and dioxin/furan TEQ concentration of 598 ng/kg. Table 5 summarizes the PCB Aroclor 1260 data by reach and fish species.

Table 5 –Fish, Maximum PCB Concentrations (mg/kg)

DOWNSTREAM REACH	CRAYFISH (WHOLE BODY)	YELLOW BULLHEAD (WHOLE BODY)	BLUEGILL SUNFISH (WHOLE BODY)	LARGEMOUTH BASS (FILET)	CHANNEL CATFISH (FILET)
Reach B	11	22	---	---	---
Upper Brier Creek Reservoir	---	---	2.5	1.8	---
Middle Brier Creek Reservoir	---	---	2.5	2.6	---
Lower Brier Creek Reservoir	---	---	0.38	0.65	---
Brier Creek	0.074	0.5	0.49	---	---
Lake Crabtree Sector A	---	---	0.9	0.3	0.67
Lake Crabtree Sector B	---	---	0.17	0.12	1.3
Lake Crabtree Sector C	---	---	0.15	0.19	1.7
Crabtree Creek	---	0.074	0.59	0.18	0.34

Legend: --- Not sampled

As indicated in the table above, PCB Aroclor 1260 results generally show a declining trend in both whole body and filet concentrations in the samples farther downstream from the Ward Transformer facility. Fish tissue data from Crabtree Creek indicate continued downstream transport of PCBs below Lake Crabtree. Although the sediment samples from Crabtree Creek did not contain detectable concentrations of PCBs, their presence in fish samples indicates uptake and bioaccumulation of PCBs via the food chain.

Based on the analytical results of the fish tissue samples, the North Carolina Division of Public Health issued fish consumption advisories for the protection of humans consuming fish potentially contaminated with PCBs. The fish consumption advisories action levels for PCB are described in Tables 6.

Table 6 – Fish Consumption Recommended Limits

TOTAL PCB LEVELS IN FISH (mg/kg)	RECOMMENDED MEAL LIMITS
<0.05	Unlimited consumption.
0.05 to 0.10	One meal per week.
0.10 to 0.50	One meal per month
>0.5	Do not eat

The fish consumption advisories that are currently in effect for the water bodies within OU1 are summarized in Table 7.

Table 7 – Current Fish Consumption Advisories for OU1 areas

AREA	NORTH CAROLINA FISH CONSUMPTION ADVISORY
Brier Creek Reservoir Little Brier Creek (downstream of Brier Creek Parkway) Tributaries to Little Brier Creek	Do not eat fish.
Brier Creek	Do not eat any fish.
Lake Crabtree	Do not eat carp or catfish. Limit consumption of all other fish to no more than one meal per month.
Crabtree Creek (above Lake Crabtree and below Lake Crabtree to where it enters the Neuse River)	Limit consumption of carp, catfish, and largemouth bass to no more than one meal per month.

7.0 CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES

Land use in the vicinity of the Ward Transformer facility is primarily industrial and commercial, with major highways located north (US highway 70) and west (I-540). Two properties located east of the site, across Mount Herman Road, were formerly used as residences. These properties are currently vacant or now used for commercial purposes. Much of the land located south-southwest of the property is owned by the RDU Airport Authority. The airport land, and the facility and surrounding industrial/commercial properties are generally access restricted (fenced). The properties located to the rear (northwest, west, and southwest) of the Ward Transformer facility consist of vacant undeveloped woodland.

Land use along the Reach A through D portions of the downstream study area, includes undeveloped woodland primarily owned by the RDU Airport Authority or Ward Ventures LLC. Along Reaches B and C, the nearest developed properties consist of commercial retail businesses. Along the western portion of Reach D, land is used for commercial purposes and

mainly consists of warehouse distribution buildings. The eastern portion of Reach D is owned by the RDU Airport Authority and is access restricted.

The nearest active residence downstream of the site is located approximately 1.7 miles downstream, at 10305 Globe Road, in the vicinity of Little Brier Creek's mouth at Brier Creek Reservoir. Two properties located on the north bank of Brier Creek Reservoir, between Globe Road and Nelson Road, were formerly used for residential purposes. These residences are vacant, however, and future land use of the properties will be for non-residential purposes. The remainder of land around Brier Creek Reservoir is primarily owned by the RDU Airport Authority and is access restricted. Brier Creek Reservoir is posted by Wake County to restrict trespassers.

Land use in the vicinity of Brier Creek between Brier Creek Reservoir and Lake Crabtree consists of commercial office space and undeveloped land under RDU Airport Authority control. The portion of Lake Crabtree northwest of Aviation Parkway, in the vicinity of Brier Creek's mouth, is undeveloped dense forest and wetland and is generally inaccessible. To the southeast of Aviation Parkway, Wake County owns a park that surrounds most of Lake Crabtree (Lake Crabtree County Park) and is used extensively for recreation. The park is located along the lake's north shore, while a walking/hiking trail (Lake Trail) generally follows the entire lake's shoreline and connects with adjacent community greenways. Lake Trail and the greenways are heavily used by joggers, walkers, and bikers. Lake Crabtree is a recreational fishery, but the park has posted fishing advisories and "catch and release" rules to protect fishermen from eating contaminated fish. Beyond the Lake Trail, the land is primarily used for commercial office space, although a property located along the southeastern portion of the lake is currently being developed for mixed residential and non-residential uses.

From Lake Crabtree, land use features along Crabtree Creek include the North Cary Wastewater Treatment Plant (WWTP), I-40, and William B. Umstead State Park (Umstead Park), a relatively undisturbed forested area. The state park protects nearly 5,400 acres of forestland, through which Crabtree Creek flows for several miles. Upon exiting Umstead Park, land use along Crabtree Creek is primarily suburban residential, until the creek approaches US Highway 70/Glenwood Avenue, after which land use becomes more urbanized. Land use along Crabtree Creek for the remainder of the downstream study area is primarily heavily urbanized, including dense residential and commercial/industrial/institutional use within the City of Raleigh.

8.0 SUMMARY OF SITE RISKS

The Baseline Human Health Risk Assessment (BHHRA) and the Baseline Ecological Risk Assessment (BERA) present the summary of the results of the comprehensive deterministic risk assessments of the potential threats to public health and the environment posed by the OUI areas under current and future conditions assuming that no remedial actions take place. The assessments provide the basis for taking action and identify the site related contaminants and

exposure pathways that need to be addressed by the remedial action. The BHHRA and BERA are part of the RI report. The RI report presents more details and is part of the administrative record for the Site. This section presents a summary of the BHHRA and BERA.

PCBs have been detected in soil, sediment, and fish at various locations downstream from the Ward Transformer facility. The areas addressed under OU1 extend from Reach B (0.4 miles downgradient of the Ward Transformer facility) to the end of Crabtree Creek at the Neuse River. (Figure 1)

Note that Reach A is included in the risk discussion, because Reach A was grouped with all the other downgradient areas during the planning stages of the risk assessment process. However, as previously noted, sediment and flood plain soil from Reach A are being addressed under the ongoing time critical removal action.

8.1 Baseline Human Health Risk Assessment (BHHRA)

The BHHRA estimates the risks the Site poses to humans if no action were taken. It provides the basis for taking action and identifies the contaminants and exposure pathways that need to be addressed by the remedial action. The sections below summarize the results of the BHHRA for OU1.

8.1.1 Identification of Chemical of Concern (COC)

Chemicals of concern (COCs) are a subset of the site-related chemicals that were carried through the risk assessment (Chemicals of Potential Concern (COPCs)) that significantly contribute to the cumulative site risk.

The carcinogen trigger represents the summed risks to a receptor considering all pathways, media, and routes per land use scenario. The Hazard Index (HI) represents the total of the Hazard Quotients (HQs) of all COPCs in all pathways, media, and routes to which the receptor is exposed. Chemicals are not considered as significant contributors to risk if their individual carcinogenic risk contribution is less than 1×10^{-6} and their noncarcinogenic HQ is less than 0.1; therefore, these chemicals are not included as COCs. In addition, because 2,3,7,8 TCDD TEQ did not exceed the 1×10^{-4} cumulative site risk level or the site HI of 1 used as the remediation triggers, it is not included in the list of COCs.

Based on the BHHRA the COCs for OU1 are PCBs and PCB congeners. Although some of the calculated human health risks are associated with exposure to dioxins and furans (2,3,7,8 TCDD TEQ), over 90% of the risks are associated with PCBs (Aroclor 1260 or PCB congeners). As such PCBs and PCB congeners are the site-related chemicals driving the need for a remedial action at OU1.

The tables below present the COCs and their exposure point concentrations (EPCs) for each media and study area with significant routes of exposure. The tables also include the range of

concentrations, as well as the frequency of detections (i.e., the number of times the chemical was detected in the samples collected), the EPC (i.e., the concentration that was used to estimate exposure and risk for each COC in the specific media and area), and how the EPC was derived. Aroclor 1260 was the most frequently detected COC in all media and all areas. In most cases, the 95% UCL on the arithmetic mean was used as the EPC. However, for PCB congeners in some media where there were limited amount of sample data available, the maximum concentration was used as the default exposure point concentration. The COCs for the OUI ROD are presented in Tables 8 to 13.

Table 8 – Reach A - Chemicals of Concern (Floodplain Soil)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: SOIL								
Exposure Medium: FLOODPLAIN SOIL								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Floodplain Soil	Aroclor 1260	0.21	380	mg/kg	11/14	148	mg/kg	95% UCL
	PCB Congener TEQ	0.000288	0.00363	mg/kg	2/2	0.00363	mg/kg	MAXIMUM
Key: mg/kg: Milligrams per kilogram 95 % UCL- 95 percent Upper Confidence Limit								

Table 9 – Reach A - Chemicals of Concern (Sediment)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: SEDIMENT								
Exposure Medium: SEDIMENT								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration (EPC)	EPC Units	Statistical Measure
		Min	Max					
Sediment	Aroclor 1260	0.014	62.0	mg/kg	33/33	19.8	mg/kg	95% UCL
	PCB Congener TEQ	0.000209	0.105	mg/kg	11/11	0.071	mg/kg	95% UCL
Key: mg/kg: Milligrams per kilogram 95 % UCL- 95 percent Upper Confidence Limit								

**Table 10 - Reaches B-C-D, Brier Creek Reservoir and Brier Creek
Chemicals of Concern (Sediment)**

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: SEDIMENT								
Exposure Medium: SEDIMENT								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration (EPC)	EPC Units	Statistical Measure
		Min	Max					
Sediment	Aroclor 1260	0.0195	4.2	mg/kg	53/67	1.2	mg/kg	+95% UCL
	PCB Congener TEQ	0.000000589	0.005	mg/kg	25/25	0.0014	mg/kg	95% UCL
Key: mg/kg: Milligrams per kilogram UCL: Upper Confidence Limit								

Table 11 - Brier Creek Reservoir Chemicals of Concern (Fish)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: FISH								
Exposure Medium: FISH FILLET								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Fish	Aroclor 1260	0.22	2.60	mg/kg	12/12	1.64	mg/kg	95% UCL
	PCB Congener TEQ	0.000000452	0.0000311	mg/kg	12/12	0.000024	mg/kg	95% UCL
Key: mg/kg: milligrams per kilogram UCL: Upper Confidence Limit								

Table 12 – Lake Crabtree Chemicals of Concern (Fish)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: FISH								
Exposure Medium: FISH FILLET								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Fish	Aroclor 1260	0.100	1.70	mg/kg	10/10	0.99	mg/kg	95% UCL
	PCB Congener TEQ	0.0000259	0.0000311	mg/kg	10/10	0.000030	mg/kg	95% UCL
Key: mg/kg: milligrams per kilogram UCL: Upper Confidence Limit								

Table 13 – Crabtree Creek Chemicals of Concern (Fish)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: FISH								
Exposure Medium: FISH FILLET								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Fish	Aroclor 1260	0.033	0.34	mg/kg	9/12	0.18	mg/kg	95% UCL
	PCB Congener TEQ	0.00000103	0.00000683	mg/kg	11/11	0.0000068	mg/kg	MAXIMUM
Key: mg/kg: milligrams per kilogram UCL: Upper Confidence Limit								

8.1.2 Exposure Assessment

The goal of the exposure assessment is to determine the extent of potential exposure of susceptible populations. PCB contamination as a result of past operational practices at the Ward Transformer facility is the primary source of concern at the study areas. A summary of the exposure assessment results is presented below. Section 5.3 of the RI report presents the complete exposure assessment conducted as part of the risk assessment process.

8.1.2.1 Characterization of current and future land and water uses of the study areas

PCBs migrating from the Ward Transformer facility have been detected in soil, sediment, surface water, and fish in various segments of the study area. Land and surface water extending from the Ward Transformer facility to the Neuse River have a number of current and potential future uses. Figure 1-5 illustrates the locations of the areas described below.

- **Reach A** – Reach A does not support recreational fishing or swimming due to its small size and intermittent flow, and most likely, will not be developed in the future for residential use. However, the area along the unnamed tributary to Little Brier Creek can be accessed by current or future trespassers and contact with surface water and sediment could occur during wading or other similar activities.
- **Reaches B, C, and D** – Reaches B and C are part of the unnamed tributary. Reach D is the Little Brier Creek, prior to its entrance into Brier Creek Reservoir. These reaches are not zoned for residential development. These areas do not support recreational fishing or swimming due to the small size of the stream therefore, fish file data was not collected here. It was assumed that resident children may wade in these areas.
- **Brier Creek Reservoir and Lake Crabtree** – Brier Creek Reservoir and Lake Crabtree contain significant numbers of sport fish including catfish species, largemouth bass, and bluegill sunfishes. Recreational fishing occurs currently and will likely continue to occur in the future. Fish samples collected during the RI contain PCBs. Fish advisory signs are in place in the Brier Creek Reservoir area and Lake Crabtree warning fishermen of the detection of dangerous levels of PCBs in recreationally caught fish. In addition to fishing activities, publicly accessible swimming areas at Lake Crabtree may expose families to contaminants in surface water and sediment while swimming. Residential development is possible near Brier Creek Reservoir; thus, a future resident wader scenario was considered for this area. Bicycle paths and ball fields are present at Lake Crabtree therefore, bikers/joggers and ball players could potentially be exposed to contaminated soil. Children in areas adjacent to Reaches B, C, and D could potentially wade in sediment and surface water of Brier Creek Reservoir. Because the swimming exposure pathway was evaluated at Lake Crabtree, a wader scenario was not considered in Lake Crabtree.
- **Lower Brier Creek** – This area is between Brier Creek Reservoir and Lake Crabtree. This portion of the creek does not support recreational fishing or swimming, and no fish file

tissue data are available for evaluation. A child resident could wade in sediment and surface water.

- **Crabtree Creek** – This area is between Lake Crabtree and the Neuse River. This area supports recreational fishing.

8.1.2.2 Exposure Pathway Analysis

An exposure pathways analysis depicts the contaminated media, potential exposure routes and pathways, and potentially susceptible known or potential human populations. A key function of the analysis is to identify complete exposure pathways and to assist in the development of exposure scenarios and dose estimation models.

Exposure Scenarios

There are several susceptible populations in the study areas. The following exposure scenarios were considered in the risk assessment:

- Current/Future Trespasser in Reach A – Evaluated.
- Future Resident in Reaches B, C, and D – Based on zoning restrictions and the improbability of development in these areas, residential risks were not quantitatively evaluated.
- Future Resident Wader in Reaches B, C, and D, Brier Creek Reservoir, and Brier Creek – Evaluated.
- Current/Future Recreational Fisher in Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek – Evaluated.
- Current/Future Swimmer in Lake Crabtree – Evaluated.
- Current/Future Biker/Jogger at Lake Crabtree Park – PCB Aroclors were not detected in any of the soil samples and the TEQ for the detected PCB congeners was less than EPA screening value.
- Current/Future Ball Player at Lake Crabtree Park – PCB Aroclors were not detected in any of the soil samples and the TEQ for the detected PCB congeners was less than the EPA screening value.

Exposure Pathways

Exposure pathways evaluated for each scenario are presented in Table 8-1 (Appendix B). A simplified chart summarizing these exposures is presented in Table 14 below.

Table 14 - Summary of Complete Exposure Pathways Evaluated

EXPOSURE PATHWAY	DESCRIPTION	REACH A	REACHES B, C, AND D	BRIER CREEK RESERVOIR	BRIER CREEK	LAKE CRABTREE	CRABTREE CREEK
Soil Contact	Incidental ingestion, dermal contact, dust inhalation	Adolescent trespasser	Child and adult resident waders	Child and adult resident waders	Child and adult resident waders		
Sediment Contact	Incidental ingestion, dermal contact	Adolescent trespasser	Child and adult resident waders	Child and adult resident waders	Child and adult resident waders		
Surface Water Contact	Incidental ingestion, dermal contact					Child and adult swimmers	
Fish Ingestion	Consumption of recreationally caught fish			Child and adult recreational fishermen		Child and adult recreational fishermen	Child and adult recreational fishermen

8.1.3 Toxicity Assessment

The toxicity assessment will identify and define the toxicity values for the evaluation of COPCs at the Ward Transformer Superfund Site. These toxicity values are applied to the estimated exposure doses in order to calculate potential cancer risks and noncancer health effects.

Chemicals that have evidence of carcinogenicity are referred to as carcinogens. Excessive exposure to all chemicals potentially can produce adverse noncancer health effects, while the potential for causing cancer is limited to carcinogens. Therefore, noncancer toxicity values can be developed for all chemicals, while cancer toxicity values can be developed only for carcinogens. The noncancer toxicity values used in this risk assessment are termed reference doses (RfDs), and the cancer toxicity values are termed cancer slope factors (CSFs).

RfDs and CSFs are expressed in units of milligrams of chemical per kilogram of body weight per day (mg/kg-day), or cancer risk per mg/kg-day, respectively. Inhalation reference concentrations (RfCs) and unit risk factors (URFs) are converted to RfDs and CSFs, respectively, according to EPA guidance.

See Tables 8-2 through 8-5 (Appendix B) for cancer slope factors and RfDs used in the BHHRA.

Carcinogenic Effects

Weight-of-Evidence Categorization

EPA has assigned each chemical a weight-of-evidence, which represents the likelihood of it being a human carcinogen. Six weight-of-evidence categories exist:

- **A** Human carcinogen, based on sufficient evidence from human data.
- **B1** Probable human carcinogen, limited human data are available.
- **B2** Probable human carcinogen, sufficient evidence in animals and inadequate or no evidence in humans.
- **C** Possible human carcinogen, limited evidence of carcinogenicity in animals and evidence in humans is inadequate.
- **D** Not classifiable as to human carcinogenicity, based on inadequate data in humans and animals.
- **E** No evidence of carcinogenicity in humans in at least two adequate animal tests in different species or in both adequate epidemiological and animal studies.

The Guidelines for Carcinogen Risk Assessment recommends a different scheme for weighting evidence of carcinogenicity than has been traditionally used in risk assessments. The new guidelines recommend replacing these classifications with descriptions of known likely, cannot be determined, or not likely. However, the COPCs in this BHHRA are still classified by the old system in the IRIS database.

The oral, inhalation, and dermal CSFs used in this risk assessment are expressed as an inverse dose, in units of mg/kg-day^{-1} . When EPA develops inhalation toxicity values to express carcinogenic potency through the inhalation exposure route, the values are usually developed as an inhalation URF. The URF is expressed as an inverse concentration in air in units of micrograms of chemical per cubic meter of air $(\mu\text{g/m}^3)^{-1}$. The inhalation unit risks are converted to slope factors in accordance with EPA guidance.

Dermal Slope Factors

Although EPA has developed oral and/or inhalation slope factors for a number of carcinogens, dermal slope factors have not been derived for any chemicals. EPA has published guidance, however, for calculating dermal slope factors for chemicals for which an oral slope factor is available. In accordance with EPA guidance, a dermal slope factor is derived for PCBs by dividing its oral slope factor by an appropriate absorption factor. This results in the conversion of the oral slope factor, which represents the carcinogenic potency of the administered dose, to a dermal slope factor, which represents the carcinogenic potency of the absorbed dose. The conversion is necessary to be able to calculate risk through the dermal pathway. The dermal slope factors must be consistent with the dermal doses, which are calculated in the exposure assessment as absorbed doses. The oral and inhalation doses, by contrast, are calculated as

administered doses and are evaluated using CSFs based on the administered dose. EPA has recommended a PCB gastrointestinal (GI) tract absorption factor of 100%.

Polychlorinated Biphenyls (PCBs)

PCBs are sometimes referred to by their commercial name, Aroclors. Aroclors are complex mixtures of varying amounts of PCB congeners. There are 209 known PCB congeners consisting of varying numbers of chlorine atoms. Each specific Aroclor mixture has a unique congener profile. Congeners are classified according to 10 homologue groups, depending on the number of chlorines (i.e., monochlorinated to decachlorinated homologues) attached to the biphenyl molecule. The congener content of each homologue group is dependent on the manufacturing method used to prepare the mixture. Lower numbered Aroclors (e.g., Aroclor 1016, Aroclor 1221) tend to be mixtures of congeners with lower chlorine content than the higher numbered Aroclors (e.g., Aroclor 1254, Aroclor 1260).

Non-cancer Health Effects

Derivation of Reference Doses (RfDs)

The toxicity values that are used in this risk assessment to estimate the potential for adverse noncancer health effects are termed RfDs. The term RfD refers to the daily intake of a chemical to which an individual can be exposed without any expectation of noncancer health effects (e.g., organ damage, biochemical alterations) occurring during a given exposure duration. As the RfD decreases in value, the chemical is more toxic in producing noncancer health effects.

EPA has derived RfDs for two different exposure periods. Chronic RfDs have been developed to evaluate human exposures of greater than 7 years. Subchronic RfDs have been provisionally developed to evaluate exposure periods in humans of 2 weeks to 7 years. Unlike the approach used in deriving CSFs, it is assumed when deriving RfDs that a threshold dose exists below which there is no potential for systemic toxicity.

RfDs are expressed as a dose in units of mg/kg-day. When deriving noncancer toxicity values for the inhalation exposure route, EPA expresses the value as a reference concentration (RfC) in units of milligrams of chemical per cubic meter of air (mg/m³). Because exposure doses for all pathways, including the inhalation pathway, are conventionally calculated in units of mg/kg-day, the RfCs are converted to inhalation RfDs, in accordance with EPA guidance. The conversion assumes an adult body weight of 70 kg and an inhalation rate of 20 m³/day.

Dermal Reference Doses

EPA has not derived dermal RfDs for any chemicals, but has provided guidance for deriving these values for chemicals for which an oral RfD is available. In accordance with EPA guidance, dermal RfDs are derived by multiplying each oral RfD by an appropriate absorption factor. The absorption factor for PCBs was selected as 100%.

Reference Doses for PCBs

The primary PCB mixtures found at the site are Aroclor 1254 and Aroclor 1260. The Aroclor 1254 RfD was used as a surrogate because there is no current RfD for Aroclor 1260, the predominant PCB mixture believed to be present at the site.

8.1.4 Risk Characterization

In the baseline risk characterization, the results of the toxicity and exposure assessments are summarized and integrated into quantitative and qualitative expressions of potential risk for carcinogenic compounds and into a HI for non-carcinogenic compounds. The baseline risk characterization presents Reasonable Maximum Exposure (RME) and average/central tendency exposures to baseline site conditions in the absence of additional site controls or remediation.

Non-carcinogenic Hazard

The potential for non-carcinogenic effects is evaluated by comparing an exposure level over a specified time period (*e.g.*, life-time) with a reference dose (RfD) derived for a similar exposure period. A RfD represents a level that an individual may be exposed to that is not expected to cause any deleterious effect. The ratio of exposure to toxicity is called a hazard quotient (HQ). An HQ<1 indicates that a receptor's dose of a single contaminant is less than the RfD, and that toxic non-carcinogenic effects from that chemical are unlikely. The Hazard Index (HI) is generated by adding the HQs for all chemicals of concern that affect the same target organ (*e.g.*, liver) or that act through the same mechanism of action within a medium or across all media to which a given individual may reasonably be exposed. An HI<1 indicates that, based on the sum of all HQs from different contaminants and exposure routes, toxic non-carcinogenic effects from all contaminants are unlikely. An HI >1 indicates that site-related exposures may present a risk to human health.

The HQ is calculated as follows:

$$\text{Non-cancer HQ} = \text{CDI/RfD}$$

Where: CDI = chronic daily intake
RfD = reference dose

CDI and RfD are expressed in the same units and represent the same exposure period (*e.g.*, chronic, sub-chronic, or short-term).

Carcinogenic Risk

For carcinogens, risks are generally expressed as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the carcinogen. Excess lifetime cancer risk is calculated from the following equation:

$$\text{ILCR} = \text{CDI} \times \text{SF}$$

Where: ILCR (Incremental Lifetime Cancer Risk) Cancer Risk = a unit-less probability (e.g., 2×10^{-5}) of an individual developing cancer

CDI = chronic daily intake averaged over 70 years (mg/kg-day)

SF = slope factor, expressed as (mg/kg-day)⁻¹.

These risks are probabilities that are expressed in scientific notation (e.g., 10^{-6}). An excess lifetime cancer risk of 1×10^{-6} indicates that an individual experiencing the reasonable maximum exposure estimate has a 1 in 1,000,000 chance of developing cancer as a result of site-related exposure. This is referred to as an “excess lifetime cancer risk” because it would be in addition to the risks of cancer individuals face from other causes such as smoking or exposure to too much sun. The chances of an individual developing cancer from all other causes have been estimated to be as high as one in three. EPA’s acceptable risk range for excess lifetime cancer risk from site-related exposure is 10^{-4} to 10^{-6} .

Risk Characterization Results

Table 8-6 (Appendix 2) summarizes the cancer and non-cancer risk calculated for each study area and exposure scenario by exposure pathway and medium. The five study areas evaluated include:

- Reach A
- Combined Reaches B, C, and D, Brier Creek Reservoir, and Brier Creek
- Lake Crabtree
- Crabtree Creek

Media are designated SS (surface soil), SD (sediment), SW (surface water), and FT (fish file). Where appropriate, the cancer and non-cancer risk from each medium were subtotaled separately, as well as combined to calculate a cancer and non-cancer risk (Hazard Index (HI)) for the total site (all media). Total risks were expressed either in terms of Aroclors or PCB congeners for scenarios that had both types of data available because adding risks for Aroclors and PCB congener TEQs within a given exposure pathway or scenario could potentially result in double counting of PCB exposure since it is known that commercial Aroclor mixtures contain various proportions of these congeners. Risks from any other chemicals were incorporated into the total for both.

The Reach A trespasser scenario exceeded EPA’s risk management range of 1×10^{-4} to 1×10^{-6} cancer risk. The HI (based on Aroclors) was also greater than the noncancer HI management level of one. Cancer risk and HI were dominated by exposure to floodplain surface soils.

The fishermen scenarios had the highest risks (based on PCB congeners) and HIs (based on Aroclors) of all scenarios evaluated.

The swimmer scenarios (Lake Crabtree) had the lowest risks of all scenarios evaluated. Both ILCRs and HIs were consistent with EPA's acceptable risk management range (i.e., ILCR, 1×10^{-6} to 1×10^{-4} ; HI, <1).

The wader scenarios (combined Reaches B, C, and D, Brier Creek Reservoir, and Brier Creek) were also consistent with EPA's acceptable risk management range for ILCR and HI.

8.1.4.1 Risk Characterization Summary

EPA's acceptable cancer risk range for contaminated waste sites is 1×10^{-6} (1 in 1 million) to 1×10^{-4} (1 in 10,000), and the acceptable site HI is one. Based on these criteria, the resident wader is within this acceptable range even if surface water dermal exposure is considered. The swimmer scenario for Lake Crabtree was also within the acceptable risk limits. The largest cancer and non-cancer risks were associated with the consumption of fish filets in the fishing scenarios farther downstream in Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek. These risks, which are summarized in the Table 15, were in general unacceptable, with the possible exception of Crabtree Creek, which had marginal cancer risk and HI excursions.

Table 15 – Carcinogenic Risk Results

RISK SCENARIO	RECEPTOR	CHEMICAL	CARCINOGENIC RISK*	PERCENT OF RISK
Brier Creek Reservoir Eating Fish Filets	Younger Child Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	3.97 E-06 1.10 E-04	4 96
	Adult Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	1.89 E-05 5.25 E-04	4 96
Lake Crabtree Eating Fish Filets	Younger Child Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	6.81 E-06 1.38 E-04	5 95
	Adolescent Child Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	5.47 E-06 1.10 E-04	5 95
	Adult Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	3.24 E-05 6.54 E-04	10 90
Crabtree Creek Eating Fish Filets	Adult Recreational Fisherman	Dioxin TEQ PCB Congener	----- 1.50 E-04	100

* For PCB risks, the larger of the Aroclor or congener TEQ risks was selected.

----- No dioxin/furan samples were collected from fish caught in Crabtree Creek

Although some of the risks were associated with exposure to dioxins and furans, over 90% of the risks were associated with PCBs. Because of the high uncertainty levels associated with Aroclors and PCB congeners, it is difficult to determine if risks were overestimated or underestimated. However, the fishing scenarios were associated with high risk levels from PCB contamination, and justify the North Carolina fishing advisories currently in place in Brier Creek Reservoir, Brier Creek, Lake Crabtree, and Crabtree Creek, regardless of the uncertainties.

8.2 Baseline Ecological Risk Assessment (BERA)

A Screening Level Ecological Risk Assessment (SLERA) was prepared and included in the RI report. The Scientific Management Decision Point (SMDP) for the SLERA recommended that a BERA be prepared for this Site. The results of the RI and SLERA indicate that contaminants have migrated from the Ward Transformer facility and that the maximum concentrations detected in a variety of media, including sediments, soil, and water, are at levels that are likely to pose risk to ecological receptors utilizing the affected areas.

Thus, the scope of the BERA is to evaluate impacts of site-related contaminants (i.e., PCB and dioxin-like congeners) on off-site surface waters from Reach A to Crabtree Creek.

8.2.1 Objectives

The primary objectives of the BERA are to:

- Evaluate contaminant levels [primarily polychlorinated biphenyls (PCBs) and dioxin-like PCB congeners] in sediment, floodplain soil, surface water, and fish and invertebrate tissue.
- Assess the potential for adverse impact to ecological receptors, focusing on exposures to avian and terrestrial piscivores and aquatic insectivores.
- Develop conclusions and recommendations for additional investigation or no further action, as appropriate, based on the findings from the BERA.

8.2.2 Problem Formulation

The problem formation establishes the goals, breadth, and focus of the BERA. The problem formulation also establishes assessment endpoints or specific ecological values to be protected. The questions that need to be addressed are defined based on potentially complete exposure pathways and ecological effects. The conceptual exposure model shows the complete exposure pathways evaluated in the BERA and the relationship of the measurement endpoints and the assessment endpoints.

The problem formulation for this site involves identifying the exposure pathways by which the **contaminants of ecological concern (COEC)**, which are primarily PCBs and dioxin-like PCB congeners, have migrated or may migrate from the Ward Transformer facility and ultimately to link these routes of migration to receptors and habitat in, on, and around the Site.

8.2.3 Conceptual Exposure Model

A conceptual site model defines how exposure to constituents might affect an ecosystem. The general taxonomic groups (i.e., terrestrial and aquatic organisms) potentially at risk from exposure at the Ward Transformer Superfund Site and the associated fate and transport mechanisms have been summarized in a conceptual exposure pathway model (Figure 13). This

figure provides a simple graphical representation of the movement of stressors through aquatic/wetland and terrestrial environments and identifies the key ecological components (i.e., target receptor species) and exposure routes that will be evaluated in the BERA.

For the Ward Transformer Superfund Site, it is assumed that complete exposure pathways exist for receptors exposed to both aquatic (surface water, sediment, organisms) and terrestrial (surface soil and organisms) media. The concentrations of PCBs and dioxin-like PCB congeners in sediment, crayfish, and fish tissue samples confirm a complete surface water pathway downstream of the Ward Transformer facility. During sampling and habitat delineation activities, signs of omnivorous mammals such as raccoons were noted and direct observations were made of piscivorous avian receptors including belted kingfisher, great blue heron, and osprey in the riparian area of the unnamed tributary to Little Brier Creek, Brier Creek Reservoir, and Lake Crabtree. The bald eagle, a listed species, is known to nest along Lake Crabtree and to forage in Lake Crabtree and Brier Creek Reservoir. These receptors are expected to forage on invertebrates and/or fish in the impacted reaches. Given the pronounced tendency of PCBs to bioaccumulate, these receptors may be adversely impacted by dietary uptake of contaminants contained in prey.

8.2.4 Assessment Endpoints

Assessment endpoints are defined as explicit expressions of the environmental value that is to be protected. The primary contaminants of concern at this site are PCBs and dioxin-like PCB congeners. Given the presence of PCBs in sediment and soil and the potential for ecological exposure to occur from sediment and soil, a set of assessment endpoints were developed for the purpose of achieving the specific goals of the BERA. The assessment endpoints represent potentially significant impacts to the Ward Transformer Superfund Site ecosystem and are based on their ability to integrate modeled, field, or laboratory data with the individual assessment endpoint. Elevated levels of PCBs in sediment and surface water are known to be toxic to fish and benthic organisms; thus, toxicity to aquatic organisms and benthic invertebrates is proposed as an assessment endpoint for PCBs. The primary ecological threat of PCBs in ecosystems is not through direct exposure or acute toxicity. Instead, PCBs bioaccumulate in food chains and PCBs have been implicated as a cause of reduced reproductive success in piscivorous birds and mammals. Therefore, reduced reproductive success in high trophic level species exposed to contaminants, especially PCBs, in soil and sediment and directly through their diet is another proposed assessment endpoint for the contaminants of concern.

8.2.5 Identification of Target Receptors

The target receptors were selected based on the concept that it is neither feasible nor cost-effective to measure constituent effects on all species inhabiting the aquatic and terrestrial habitat associated with the Ward Transformer Superfund Site. Consequently, target receptors have been selected and are evaluated as surrogate species with a high level of sensitivity and exposure to the constituents of concern at the site. These target receptors were selected to provide the most conservative estimation of exposure for similar species within the same feeding guild. Habitat characterization data, including direct and indirect observations of target receptors in the watershed, were considered in the selection process. Even though the specific target receptors

were selected for evaluation in the BERA, these species are selected to represent exposures that other (similar) species with comparable feeding guilds may be receiving, and thus, serve as “surrogate” receptors. The target receptors are:

- **Benthic Organisms** – Contamination, especially from PCBs, will adversely impact benthic organisms. Thus, the benthic organism population was selected as a receptor group in this BERA.
- **Plants and Soil - Dwelling Organisms** – Contamination, especially from PCBs, can be taken up and bioaccumulated by plants and soil-dwelling organisms. PCBs can also have an adverse impact on soil-dwelling organisms. Thus, the plant and soil-dwelling organism populations were selected as receptor groups in this BERA.
- **Fish Populations** – The effects of PCBs on fish health has been the focus of numerous scientific studies. Thus, the resident fish population was selected as a receptor group in this BERA.
- **Bald Eagle** – The bald eagle (*Haliaeetus leucocephalus*), our national symbol, is a federally designated threatened species (though the bald eagle is proposed for delisting). Bald eagles have been observed along Lake Crabtree and have nested in the immediate vicinity of the lake. They may also be foraging within their home range in Brier Creek Reservoir. The bald eagle was selected as a receptor species because of its status as a threatened species, its position at the top of the food chain, and its piscivorous feeding habits.
- **Great Blue Heron** - The great blue heron (*Ardea herodias*) is a large aquatic bird with a long neck and spear-like bill. Great blue heron inhabit a variety of freshwater and marine habitats, and they have been observed near the site. The blue heron’s main prey items are fish and amphibians, but it will also eat small mammals, reptiles, crustaceans, insects, and birds. The great blue heron was selected as a target receptor species based on its presence at the site and its diet, which may include fish and crayfish.
- **Mink** - The mink (*Mustela vison*) is the most abundant and widespread carnivorous mammal in North America, primarily feeding on fish and crustaceans. Mink are associated with aquatic habitats of all kinds, including rivers, streams, lakes, ditches, swamps, marshes, and backwater areas. Numerous studies have demonstrated that mink are among the most sensitive of the tested mammalian species to the toxic effects of PCBs. The mink was selected as a receptor species because of its PCB sensitivity, its position at the top of the food chain, and its piscivorous feeding habits.
- **Raccoon** - The common raccoon (*Procyon lotor*) is an omnivore, feeding on whatever is most available during a given season. Its diet includes fruits, berries, nuts, acorns, insects, small mammals, birds and their eggs, crayfish, crabs, frogs, turtle eggs, and fish. The raccoon is found throughout the United States, and has been observed at the Site. The raccoon is seldom

found far from water, a fact which influences the local distribution of this species. The raccoon was selected as a receptor species because of its presence at the site and its omnivorous feeding habits, which include consumption of both aquatic and terrestrial plants.

- **American Robin** - Omnivorous birds such as the American robin (*Turdus migratorius*) are an important prey item for higher trophic level predators, and also play an important role in seed dispersal and pollination for many types of terrestrial vegetation. Robins occur throughout most of the continental United States. They are common medium-sized birds that eat worms, insects, and fruits, depending on the season and availability. Although robins are often migratory, some individuals may remain in the same territory throughout the year. The American robin was selected as a receptor species to represent the effects of the site contaminants on an omnivorous bird.
- **Deer Mouse** - The deer mouse (*Peromyscus maniculatus*) is omnivorous and feeds primarily on seeds, arthropods, some green vegetation, roots and fruits, and fungi as available. It lives in a wide variety of habitats. The mouse is nocturnal and is preyed upon by owls, hawks, snakes, and carnivorous mammals. The deer mouse was selected as a receptor species because of its feeding habits and because small omnivorous mammals are an important prey item for higher trophic level predators. They also play an important role in seed dispersal for many types of terrestrial vegetation.

8.2.6 Development of Exposure Point Concentrations

EPCs were developed by environmental medium and by habitat type. Separate EPCs were developed for each environmental medium based on habitat type, with the data grouped into the following habitats:

- Little Brier Creek and Tributaries
- Banks of Little Brier Creek and Tributaries
- Brier Creek Reservoir
- Brier Creek (Below Brier Creek Reservoir)
- Lake Crabtree
- Crabtree Creek

Locations of these habitats are shown in Figure 1.

The maximum detected concentration or a representative average concentration was evaluated as the EPC in quantifying exposure of ecological receptors to each environmental medium (i.e., tissue, surface water, sediment, and bank soil). The representative average EPC is the 95 percent upper confidence limit (95% UCL) on the arithmetic mean. The 95% UCL was calculated using EPA's ProUCL (Version 3.0) software. Data reduction methods were the same as described in the Human Health Risk Assessment. If a chemical was reported as a nondetect in a sample set

(i.e., medium) containing at least one positive identification, it was assumed to be present at one-half the sample quantitation limit (SQL) in all nondetected samples in the calculation of the 95% UCL concentration of the arithmetic mean. For dioxins and furans and for dioxin-like PCB congeners, a 2,3,7,8-TCDD toxic equivalent quotient (TEQ) was calculated using World Health Organization (WHO) toxic equivalency factors (TEFs), as described in the Human Health Risk Assessment. If a given congener was not detected in any samples for that medium, a TEQ was not calculated. If the congener was detected at least once in that medium, the TEQ for samples where it was not detected was determined by multiplying one-half its SQL with its TEF. For a given sample location, the individual congener TEQs were added to obtain a total 2,3,7,8-TCDD TEQ for that sample.

The maximum detected concentrations in whole-body tissue were selected as the EPC for fish and crayfish. The EPCs for tissue are summarized in Table 8-7 (Little Brier Creek and tributaries), Table 8-8 (Brier Creek Reservoir), Table 8-9 (Brier Creek [below Brier Creek Reservoir]), Table 8-10 (Lake Crabtree), and Table 8-11 (Crabtree Creek). Tables are included in Appendix B.

The same fish species were not collected from each reach. Sunfish and bullhead were collected from Little Brier Creek and tributaries; sunfish, bass, and bullhead were collected from Brier Creek Reservoir; sunfish and bullhead were collected from Brier Creek (below Brier Creek Reservoir); sunfish, bass, and catfish were collected from Lake Crabtree; and sunfish, bass, and catfish were collected from Crabtree Creek. Crayfish tissue was collected only from Little Brier Creek and its unnamed tributary, and Brier Creek (below Brier Creek Reservoir). To account for wildlife consuming fish of varying trophic levels, EPCs were selected for both bottomfeeders (represented by bullhead and catfish) and predators (represented by sunfish and bass). If whole body samples were not available for a grouping or concentration in the filet was greater than in the whole body sample in a reach, filet tissue results were used as the EPC. Catfish and bass filet sample results for PCBs (as Aroclors) and PCB congener TEQs were used for Crabtree Creek and bullhead filet results for PCBs (as Aroclors) were used for Brier Creek Reservoir.

The maximum detected concentration in surface water was selected as the EPC. Surface water EPCs are provided in Table 8-12 (Appendix B). Surface water samples were collected only from the Little Brier Creek and tributaries and from Lake Crabtree. PCBs (as Aroclors) were detected in Little Brier Creek; PCBs (as congeners) were not detected in surface water from Lake Crabtree.

For sediment, the maximum detected concentration was used for Brier Creek Reservoir, Brier Creek (below Brier Creek Reservoir), Lake Crabtree, and Crabtree Creek. A maximum and a representative average EPC was used for both the instream sediments from Little Brier Creek and tributaries and for sediment samples collected from the banks. The bank samples included sediment samples collected from the banks of Reaches A, B, and C of Little Brier Creek and tributaries (i.e., not within the main channel). The EPCs for instream sediment and bank sediment are presented in Table 8-13 (Little Brier Creek and Tributaries), Table 8-14 (bank

samples from Little Brier Creek and tributaries), Table 8-15 (Brier Creek Reservoir), Table 8-16 (Brier Creek [below Brier Creek Reservoir]), Table 8-17 (Lake Crabtree), and Table 8-18 (Crabtree Creek). Low level analytical methods were used to analyze PCB congeners in sediments collected in 2005 and 2006; thus, 2005 and 2006 PCB TEQ concentrations were generally lower than PCB TEQ concentrations measured in samples collected in 2003 and 2004.

The maximum detected concentration in floodplain soil was selected as the EPC. The maximum detected floodplain soil samples were collected near Little Brier Creek Reaches A and D, Brier Creek Reservoir, Crabtree Creek, and Lake Crabtree. PCBs (as Aroclors) were not detected in floodplain soil near Crabtree Creek. The EPCs for floodplain soil are presented in Table 8-19.

8.2.7 Estimation of Potential Risks

Wildlife may be exposed to PCBs and dioxins directly or through the food chain. The potential risk to the target ecological receptors is characterized in this subsection.

Benthic Organisms

To assess the potential for adverse effects on benthic organisms from exposure to potentially toxic sediment, the range of detected sediment concentrations was compared to sediment screening benchmarks (Table 8-20, Appendix B). For Little Brier Creek and tributaries, Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek, the HQs exceeded one for PCBs and dioxins. The HQ for dioxins in samples from Brier Creek (below Brier Creek Reservoir) was 1.5; PCBs were not detected in this reach. The 95% UCL concentration of PCBs in sediments of Little Brier Creek and tributaries (17.6 mg/kg) exceeded the highest of the sediment benchmarks [5.3 mg/kg severe effect level].

Although these results show a potential for adverse impacts to benthic organisms from sediment exposure, these risks may be localized at particular “hotspots,” rather than distributed throughout the habitats.

In addition, although congener PCB concentrations in sediment samples from farther downstream reaches (e.g., Crabtree Creek and Brier Creek [below Brier Creek Reservoir]) were all below their respective SQLs, the congener PCB TEQs were calculated using one-half the detection limit for those congeners detected in upstream sediment samples. Sediment samples collected in 2005 and 2006 were analyzed using low level methods, resulting in detection limits that were up to two orders of magnitude lower than the detection limits for the 2003 and 2004 samples. In Crabtree Creek, the maximum PCB TEQ for the 2006 samples was 8.5×10^{-7} mg/kg. In Brier Creek (below Brier Creek Reservoir), the maximum PCB TEQ was 1.1×10^{-6} for the 2006 samples. These concentrations are below the benthic invertebrate screening level of 2.5×10^{-6} mg/kg for dioxins.

Fish and Crayfish

Exposure of fish and crayfish to potentially deleterious concentrations of PCBs and dioxins is evaluated based on a comparison of tissue residues to residue effects concentrations (Table 8-21,

Appendix B). The maximum concentration of PCBs and dioxin TEQs in the whole body tissue for the target species collected were compared to the "tissue no observed effect doses" (NOEDs) and "low observed effect doses" (LOEDs) for similar fish and aquatic invertebrate species. For the bottom-dweller (i.e., omnivorous) fish species, the HQs for PCBs based on the NOED and LOED exceeded one for tissue collected from Little Brier Creek and tributaries. The HQ for PCBs based on the NOED was equal to one for omnivorous fish in Brier Creek Reservoir. For the other habitats, the HQs were less than one, and therefore do not indicate excess risk to omnivorous fish species.

For the predator (i.e., carnivorous) fish species, the HQs for PCBs based on the NOED and LOED for Aroclor 1260 exceeded one in Little Brier Creek and Brier Creek Reservoir. HQs based only on the NOED exceeded one for fish collected from Brier Creek (below Brier Creek Reservoir), Lake Crabtree, and Crabtree Creek. For the predatory fish species, the HQs for dioxins and combined PCB congener and dioxin TEQs were less than one and therefore do not indicate excess risk to carnivorous fish species.

For the crayfish (i.e., aquatic invertebrate), the HQs for PCBs based on the NOED and LOED exceeded one in Little Brier Creek and tributaries. HQs for PCBs based on the NOED exceeded one for crayfish collected from Brier Creek (below Brier Creek Reservoir) and from Crabtree Creek. For the aquatic invertebrate species, the HQs for dioxins and PCB congeners were less than 1.0 and therefore do not indicate excess risk to aquatic invertebrate species. Crayfish were not collected from Brier Creek Reservoir, Lake Crabtree, or Crabtree Creek.

Plants and Soil-Dwelling Organisms

To assess the potential for adverse effects on plants and other soil-dwelling organisms from exposure to potentially toxic soil, the maximum and 95% UCL soil concentrations were compared to soil screening benchmarks (Table 8-22). The HQs for maximum concentration of PCBs in soil on the banks of Little Brier Creek and tributaries exceeded one for plants and other soil-dwelling organisms. For plants, the HQ for the 95% UCL concentration of PCBs in soil did not exceed one, while for other soil-dwelling organisms the HQ exceeded one. For floodplain soils along Little Brier Creek, the HQs for maximum and 95% UCL concentrations of PCBs exceeded one for soil-dwelling organisms but did not exceed one for plants. The single Brier Creek Reservoir floodplain soil sample had a HQ above one for soil-dwelling organisms. PCBs were not detected in Lake Crabtree floodplain soil. A plant and other-soil dwelling organism benchmark was not available for dioxins.

Other Wildlife Species

The potential risks to other wildlife species within each habitat are summarized in this subsection.

Little Brier Creek and Tributaries and Floodplain

The wildlife target receptors evaluated for Little Brier Creek and tributaries were the mink, the heron, the raccoon, the deer mouse, and the robin. The mink may be exposed to contaminants

through the ingestion of fish, sediment, and surface water. The great blue heron may be exposed to contaminants through ingestion of fish and crayfish as well as through incidental ingestion of sediment and surface water. The raccoon may be exposed to contaminants through the ingestion of crayfish, sediment and surface water, as well as through the consumption of plants and soil along the banks of the creek. The deer mouse and robin may be exposed through the ingestion of plants, invertebrates, and floodplain soil. The potential risks to the mink, heron, raccoon, deer mouse, and robin are summarized in Table 8-23(Appendix B).

The no effect and low effect HQs for PCBs exceeded one for the mink, heron, and raccoon using both the maximum and average (i.e., 95% UCL) exposure point concentrations (EPCs) for sediment. For the maximum sediment EPC, the HQ ranged from 43 to 8.8 for the mink, 38 to 3.8 for the heron, and 10 to 2.7 for the raccoon. For the average sediment EPC, the HQ ranged from 43 to 8.8 for the mink, 36 to 3.6 for the heron, and 9.7 to 2.6 for the raccoon. This risk is primarily associated with the consumption of contaminated prey.

For the maximum sediment EPC, the no effect and low effect HQs for the PCB congener TEQ exceeded one, ranging from 100 to 10 for the mink, from 56 to 5.6 for the heron, and from 350 to 35 for the raccoon. For the average sediment EPC, the no effect HQs for the PCB congener TEQ exceeded one for the mink, heron, and raccoon, while the low effect HQs exceeded one only for the mink and raccoon. The PCB congener no effect HQs were 51 for the mink, 9.1 for the heron, and 210 for the raccoon, and the low effect HQs were 5.1 for the mink, 0.91 for the heron, and 21 for the raccoon. These risks from PCB congener TEQs are also primarily through food consumption. For the maximum EPC, the no effect HQ for the dioxin TEQ exceeded one only for the mink (1.7). Thus, PCBs and dioxin-like PCB congeners pose a risk to wildlife species along the Little Brier Creek and tributaries, especially through the consumption of contaminated prey and sediment.

The no effect and low effect HQs exceeded one for the deer mouse and robin inhabiting floodplain soils and are primarily associated with the consumption of contaminated prey. Thus, PCBs pose a risk to the deer mouse and robin inhabiting the floodplain along Little Brier Creek.

Banks of Little Brier Creek and Tributaries

The wildlife target receptors evaluated for the riparian area along the banks of Little Brier Creek and tributaries were the robin and deer mouse. The robin and deer mouse may be exposed to contaminants through the ingestion of plants, earthworms, and soil along the banks of the creek. They may also consume surface water from the creek. The potential risks to the robin and deer mouse are summarized in Table 8-24 (Appendix B).

The no effect and low effect HQs for PCBs exceeded one for both the robin and the deer mouse using both the maximum and average soil concentrations. For the maximum soil EPC, the HQ ranged from 8,700 to 870 for the robin and from 4,400 to 880 for the deer mouse. For the average soil EPC, the HQ ranged from 4,200 to 420 for the robin and from 2,100 to 430 for the deer mouse. These risks are primarily associated with the consumption of contaminated earthworms

that have bioaccumulated PCBs. The no effect and low effect HQs for the PCB congener TEQ and the dioxin/furan TEQ also exceeded one for the robin and deer mouse, again primarily through food consumption. For the maximum soil EPC, the PCB-congener TEQ HQs ranged from 190,000 to 19,000 for the robin and from 1,000,000 to 100,000 for the deer mouse. For the average soil EPC, the PCB-congener TEQ HQs ranged from 47,000 to 4,700 for the robin and 610,000 to 61,000 for the deer mouse. For the maximum soil EPC, the dioxin/furan TEQ HQs ranged from 250 to 25 for the robin and from 970 to 97 for the deer mouse. For the average soil EPC, the dioxin/furan TEQ HQs ranged from 120 to 12 for the robin and from 460 to 46 for the deer mouse. Thus, PCBs, dioxin-like PCB congeners, and dioxin/furans pose a risk to terrestrial wildlife species which may consume contaminated prey along the banks of Little Brier Creek and tributaries.

Brier Creek Reservoir and Floodplain

The wildlife target receptors evaluated for Brier Creek Reservoir and the associated floodplain were the mink, the heron, the eagle, the deer mouse, and the robin. The mink, heron, and eagle may be exposed to contaminants through the ingestion of fish and sediment. The deer mouse and robin may be exposed through the ingestion of plants, invertebrates, and soil. The potential risks to the mink, heron, eagle, deer mouse, and robin are summarized in Table 8-25.

The no effect HQs for the mink exceeded one for PCB (3.8) and the PCB congener TEQ (18). This risk is primarily associated with the consumption of contaminated prey. The low effect HQs for the mink did not exceed one for PCBs but did exceed one for PCB congener TEQ (1.8). Thus, dioxin-like PCB congeners pose a risk to the mink and PCBs pose a potential risk to the mink. The no effect HQs for the heron and the eagle equal one, indicating little to no risk to these species. The no effect HQs exceeded one for the deer mouse and robin inhabiting floodplain soils and is primarily associated with the consumption of contaminated prey. The low effect HQs for these two receptors did not exceed one, indicating a potential risk from PCBs in floodplain soil.

Brier Creek (Below Brier Creek Reservoir)

The wildlife target receptors evaluated for Brier Creek (below Brier Creek Reservoir) were the mink, the heron, and the raccoon. The mink may be exposed to contaminants through the ingestion of fish and sediment. The great blue heron may be exposed to contaminants through ingestion of fish and crayfish as well as through incidental ingestion of sediment. The raccoon may be exposed to contaminants through the ingestion of crayfish and sediment. The potential risks to the mink, heron, and raccoon are summarized in Table 8-26 (Appendix B).

The no effect HQs for the mink (6.8) and the raccoon (3.8) exceeded one for the PCB congener TEQ. This risk is primarily associated with the consumption of contaminated prey. The low effect HQs for the mink and raccoon did not exceed one. Thus, dioxin-like PCB congeners pose a potential risk to the mink and raccoon. The no effect HQs for the heron do not exceed one, indicating little to no risk to this species. The no-effect HQs for PCBs (as Aroclors) did not exceed one for any species.

Lake Crabtree and Floodplain

The wildlife target receptors evaluated for Lake Crabtree were mink, heron, eagle, deer mouse, and robin. The mink, heron, and eagle may be exposed to contaminants through the ingestion of fish and sediment. The deer mouse and robin may be exposed through the ingestion of plants, invertebrates, and soil. The potential risks to the mink, heron, eagle, deer mouse, and robin are summarized in Table 8-27. (Appendix B)

The no effect HQs for the mink exceeded one for the PCB congener TEQ (5.4 for congener TEQ and 1.2 for Aroclor 1260). This risk is primarily associated with the consumption of contaminated prey. The low effect HQs for the mink did not exceed one. The no effect and low effect HQs exceeded one for the deer mouse inhabiting floodplain soils and is primarily associated with the consumption of contaminated prey. Thus, PCBs and dioxin-like PCB congeners pose a potential risk to the mink and dioxin-like PCBs pose a potential risk to the deer mouse. The no effect HQs for the heron, eagle, and robin do not exceed one, indicating little to no risk to these species.

Crabtree Creek

The wildlife target receptors evaluated for Crabtree Creek were the mink, the heron, and the raccoon. The mink may be exposed to contaminants through the ingestion of fish and sediment. The great blue heron may be exposed to contaminants through ingestion of fish and crayfish as well as through incidental ingestion of sediment. The raccoon may be exposed to contaminants through the ingestion of crayfish and sediment. The potential risks to the mink, heron, and raccoon are summarized in Table 8-28.

The no effect HQs for the mink (1.6) and heron (1.9) exceeded one for the PCB congener TEQ. The no effect HQ for the heron (2.2) exceeded one for PCBs. This risk is primarily associated with the consumption of PCB-contaminated prey by the mink and heron and consumption of sediment by the heron. The low effect HQs for the mink and heron did not exceed one. Thus, dioxin-like PCB congeners pose a potential risk to the mink and heron, and PCBs pose a potential risk to the heron. The no effect HQs for the raccoon do not exceed one, indicating little to no risk to this species.

While sediment samples collected from Crabtree Creek in 2003/2004 were all below their respective SQLs, the congener PCB TEQs were calculated using one-half the detection limit for those congeners detected in upstream sediment samples. Sediment samples collected in 2005 and 2006 were analyzed using low level methods, resulting in detection limits that were up to two orders of magnitude lower than the detection limits for the 2003 and 2004 samples. In Crabtree Creek, the maximum PCB TEQ for the 2006 samples was 0.02 ng/kg while the maximum concentration for the 2003/2004 samples was 250 ng/kg. Thus, the actual concentrations of PCB congeners in Crabtree Creek sediments may be lower, resulting in lower risk from sediment ingestion by the heron.

8.2.8 Conclusion Summary

The BERA was prepared to evaluate the ecological risks associated with site-related contamination in off-site surface water bodies downstream of the Ward Transformer facility. Results of the BERA indicate that the maximum concentrations detected in a variety of environmental media are at levels that are likely to pose risk to ecological receptors utilizing the affected areas. Potentially unacceptable levels of risk to benthic organisms, fish, and aquatic organisms were estimated in Little Brier Creek and tributaries. The impacted bank sediments also pose a risk to terrestrial receptors that forage along the creek.

Although PCB concentrations in fish and crayfish in the upper reaches of the Little Brier Creek watershed are higher, whole body samples of fish from the Lake Crabtree and Crabtree Creek also indicate uptake of PCBs; demonstrating that the surface water/sediment exposure pathway is complete and current contaminant concentration may pose risk to fish-eating mammals and/or birds. The BERA concluded that there is a limited potential for risk to carnivorous birds and mammals foraging in Brier Creek Reservoir, Brier Creek, Lake Crabtree, and Crabtree Creek due predominantly to the consumption of aquatic biota containing PCBs. The hazard quotient (HQ) analysis also indicated limited risk to benthic organisms, fish, and aquatic invertebrates in these water bodies.

The documented and potential presence of threatened and/or endangered species within the impacted watershed requires additional consideration. The state endangered Atlantic pigtoe mussel and the state threatened squawfoot mussel have been reported in the nearby Umstead State Park, which is part of the Crabtree Creek watershed. These species could potentially be present in the unnamed tributary to Little Brier Creek. In addition, endangered bald eagles are nesting at Lake Crabtree and foraging at Lake Crabtree and Brier Creek Reservoir. The presence of threatened or endangered species could affect potential remedial alternatives considered for the Site. If remedial actions are planned for stream sediments, a mussel survey should be conducted to determine if endangered mussel species are present in the unnamed tributary to Little Brier Creek. If endangered species are present, potential impacts associated with remediation will require evaluation for measures to minimize or eliminate such impacts.

9.0 REMEDIAL ACTION OBJECTIVES

Based upon the findings of the RI, community and stakeholder input, and associated human health and ecological baseline risk assessments, the following Remedial RAOs were identified for OU1:

- Minimize potential downstream migration of PCB-contaminated soil and sediment.
- Reduce PCB levels in fish tissue to levels that allow for unlimited consumption.

Human Exposure:

Eliminate or minimize potential risks to human health due to consumption of contaminated fish from Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek.

- Eliminate or minimize human exposure to consumption of contaminated fish from Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek, by reducing PCB concentrations in fish tissue to levels that allow for unlimited consumption.

Eliminate or minimize potential human exposure from direct contact with contaminated sediment and floodplain soil in Reaches B, C, and D, and lower Brier Creek by reducing the PCB concentrations to a protective level.

Ecological Exposure:

- Eliminate or minimize potential risks to ecological receptors due to consumption of contaminated fish from Reach B, Reach C, Reach D, lower Brier Creek, Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek, by reducing PCB concentrations in fish tissue to levels that allow for unlimited consumption.
- Eliminate or minimize potential risks to ecological receptors due to direct contact with contaminated sediment and floodplain soil in Reaches B, C, and D, and lower Brier Creek by reducing the PCB concentration to a protective level.

In the ecological risk assessment, risk-based remediation goals for ecological receptors were calculated for the tributary to Little Brier Creek, Little Brier Creek, and Brier Creek Reservoir; the areas where most of the ecological risks were identified. Based on these ecological goals, it was determined that the human health RAOs for direct contact with sediment and fish consumption would also be protective of the primary ecological receptors (i.e., bald eagles, herons, raccoons, and mink). Therefore, once the PCB concentrations protective of human health are attained in sediment and fish tissue, the ecological risk goals should also be met. Consequently, from this point forward the primary factors driving the OU1 remediation is the human health risks associated with fish consumption and dermal contact with PCB contaminated sediment.

9.1 Remediation Goals

Based on the risk assessment conclusions, there are two distinct risks to humans from PCBs within OU1. The first is the exposure to PCBs in sediments and flood plain soil through direct human contact in Reaches B, C, and D, and lower Brier Creek. The second risk is associated with consumption of fish from Brier Creek Reservoir, Lake Crabtree, and lower Crabtree Creek. The State of North Carolina is expected to lift current fish consumption advisories in the future once PCB concentrations in fish drop to acceptable levels. Because attaining PCB levels acceptable

for fish consumption is typically more stringent and much more difficult to achieve than PCB levels in sediments, fish consumption was considered as the primary driving factor for developing Remediation Goals (RG) and remedial action alternatives for OU1.

During the development of cleanup goals for OU1, two distinct areas were addressed separately because of their use scenarios and physical nature. The first area consists of Reaches B, C, and D, and lower Brier Creek (between the Brier Creek Reservoir and Lake Crabtree). These are streams with dimensions varying from 8 to 30 ft in width and from 3 to 6.5 ft in bank height. The small size and depth of the streams (Reaches B, C, and D) located upstream of the impoundment by the Brier Creek Reservoir Dam limit their use as a recreational fishery. The water bodies in the second area consist of lower Crabtree Creek and the surface water impoundments within OU1 (located downstream of Reach D), Brier Creek Reservoir and Lake Crabtree. These areas support fishing activities.

Remediation Goal for Sediment and Floodplain Soil along Reaches B, C, and D and Lower Brier Creek

Potential OU1 remedial action cleanup goals for PCB-contaminated sediments in Reaches B, C, and D and in lower Brier Creek were evaluated as part of the Feasibility Study. Of the potential sediment/soil cleanup goals evaluated, 1 mg/kg was selected as the final sediment/soil cleanup goal for these areas of OU1, based on the following reasons:

- 1 mg/kg was determined to be protective for risk scenarios involving human contact with sediment and flood plain soil in B, C, D, and lower Brier Creek.
- A Geographic Information System (GIS) computer model, EPA's Pollutant Load Application (PLOAD) model, was employed to estimate sediment loads and PCB sediment concentrations entering Lake Crabtree and Brier Creek Reservoir from their respective watersheds. Results from model scenarios indicated that a 1 mg/kg cleanup goal for sediment in Reaches B, C, D, and lower Brier Creek combined with clean (no detected PCBs) sediment from upstream portions of the upper Brier Creek and Little Brier Creek watersheds would result in sediment loads entering Brier Creek Reservoir and Lake Crabtree at a PCB concentration in the low ppb range (less than 10 ppb). As discussed below, PCB concentrations in sediments at both the Brier Creek Reservoir and Lake Crabtree would need to be reduced to less than 10 ppb to reach the North Carolina risk-based fish tissue goal of 0.05 mg/kg for unlimited fish consumption.
- 1 mg/kg was previously selected as the sediment and floodplain soil cleanup goal for Reach A under the ongoing removal action.

Remediation Goal for Fish at Reaches B, C, and D, Brier Creek Reservoir, Lower Brier Creek Lake Crabtree and Crabtree Creek

The goal is to attain edible fish tissue concentrations that would allow current fish consumption advisories for these water bodies to be lifted in the future. There are no established regulatory criteria or standards for PCBs in sediments associated with fish consumption. However, the

North Carolina Division of Public Health has established fish consumption advisory levels for contaminants found in fish tissue. For PCBs, the maximum allowable PCB concentration in fish tissue is 0.05 mg/kg. At levels greater than 0.05 mg/kg, fish consumption advisories that limit consumption of fish may be issued by the State.

Biota-to-Sediment Accumulation Factors (BSAFs) calculations were employed to estimate the maximum allowable PCB concentrations in sediments at the Brier Creek Reservoir and Lake Crabtree necessary to achieve the North Carolina fish consumption advisory level of 0.05 mg/kg in fish for unlimited fish consumption. Using this target value as an input parameter in conjunction with the site-specific BSAFs derived from fish tissue PCB and lipid data and sediment PCB and total organic carbon data, maximum allowable sediment concentrations were estimated for several different fish species, including largemouth bass, catfish, and sunfish. The results indicated that PCB concentrations in sediments at both the Brier Creek Reservoir and Lake Crabtree would need to be reduced to the low-ppb range (i.e., less than 10 ppb) to reach the risk-based fish goal. But, regardless of how the sediment concentration would get, the risk-based fish goal for PCB is 0.05 mg/kg.

10.0 DESCRIPTION OF ALTERNATIVES

As required in the NCP, remedial alternatives were developed and remedial technologies were screened for effectiveness, implementability and cost. After screening, the remedial alternatives described in this section were retained for evaluation. More details about the alternatives and evaluation process are described in the Feasibility Study (FS) report. The FS report is part of the administrative record for the Site.

Alternative 1 – No Action

- *Assumes no action to be taken.*
- *Conduct five-year reviews.*

The No Action alternative is evaluated as required by law to serve as a baseline for other alternatives. Under the No Action alternative, no remedial actions would be implemented at the Site. The existing site conditions would continue to remain in place without any active remediation technologies or institutional controls. Risks posed by PCB contamination under future scenarios would likely remain for an extended period of time.

Although the State of North Carolina has already issued fish consumption advisories, and EPA, the State of North Carolina, and Wake County, have fish consumption signs already in place; for the purpose of this evaluation, it is assumed that the fish advisories and signs are not part of the No Action alternative. The No Action alternative would only include a review of the remedy every 5 years for 30 years (five year reviews). The cost included is for conducting the five year reviews.

Capital Costs: \$ 0
O & M Costs (Present Worth): \$ 280,000
Contingency Costs: \$ 42,000
Total Present Worth Costs: \$ 322,000
Duration to Finish Construction: Immediate

Alternative 2 - Institutional Controls

- ***Continue or enhance existing North Carolina fish consumption advisories and signs.***

Under this alternative, the North Carolina fish consumption advisories and signs would continue to remain in effect. The continued implementation of fish advisories and signs would reduce the potential risks to humans through fish consumption.

- ***Implement educational and community outreach programs.***

Community outreach and public educational programs would be developed and implemented to inform the public of the risks associated with fish consumption. This would include posting fish advisories signs, conducting meetings, distributing pamphlets, etc. These efforts would focus on groups such as sports fisherman and local communities that rely on fish consumption for part of their diet.

- ***Conduct five-year reviews.***

Five-year reviews will also be conducted as required by CERCLA.

Capital Costs: \$ 0
O & M Costs (Present Worth): \$ 414,000
Contingency Costs: \$ 62,000
Total Present Worth Costs: \$ 476,000

Duration to Finish Construction: Immediate

Alternative 3 - Monitored Natural Recovery (MNR) and Institutional Controls

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Implement educational and community outreach programs.
- Conduct five-year reviews.

Under Alternative 3 the components of Alternative 2 would be implemented in addition to MNR would be used to document achievement of the RAOs for OU 1.

▪ ***MNR and periodic monitoring of sediment and aquatic biota.***

MNR is a sediment remedy that uses ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment, thereby reducing potential risks to human and/or ecological receptors. MNR is especially effective at sites such as this where the main source of contamination would be removed (on-going removal action at Reach A and the Ward Transformer facility).

Current levels of PCBs in sediment samples within OU1 are low enough that continued burial, dispersion, and mixing-in-place alone would reduce the PCB concentrations in sediment significantly, even without the destruction or transformation of PCBs.

An MNR sampling program would be developed and implemented in accordance with EPA sediment guidance for evaluating Natural Recovery remedies, to document lines of evidence of natural recovery at this Site. Periodic monitoring of sediment would be conducted to enable assessment of PCB concentrations in sediment over time. In addition, monitoring of aquatic biota (fish sampling) would be conducted to support future decisions regarding fish consumption advisories, and protection to ecological receptors.

Capital Costs:	\$ 0
O & M Costs (Present Worth):	\$ 1,954,000
Contingency Costs:	\$ 293,128
Total Present Worth Costs:	\$ 2,247,000

Duration to Finish Construction:	Immediate
Estimated Time to Achieve RAOs:	More than 30 years

Alternative 4 – Excavation and Off-Site Disposal of Sediment from Reaches B, C, D, and Lower Brier Creek; MNR in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; and Institutional Controls

- ***Continue or enhance existing North Carolina fish consumption advisories and signs.***
- ***Implement educational and community outreach programs.***
- ***Conduct Five-year reviews.***

Under Alternative 4, the components of Alternative 2 would be implemented in addition to MNR of sediments in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; excavation and off-site disposal of PCB contaminated sediment from Reaches B, C, D and Lower Brier Creek; conduct a pre-excavation sampling program and an endangered mussel study; excavation and off-site disposal of PCB contaminated sediment from Reaches B, C, D, and Lower Brier Creek; and, conduct periodic monitoring of sediment and aquatic biota.

▪ ***MNR in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek***

Like Alternative 3 MNR would be a component of this alternative to reduce PCB levels in sediment. However, it would only apply to sediment in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.

▪ ***Conduct pre-excavation sampling of sediment and endangered mussel study.***

A pre-excavation sediment sampling program would be conducted to more accurately define the limits of excavation areas along Reaches B, C, D, and lower Brier Creek. In addition a mussel survey would also be conducted to determine if threatened/endangered mussel species are present in the selected excavation areas.

▪ ***Excavate sediment from Reaches B, C, D and lower Brier Creek, and transport sediments off-site for appropriate disposal.***

Based on the results of the pre-excavation sampling program, sediment with PCB concentrations above 1 mg/kg would be excavated from Reaches B, C, D, and lower Brier Creek. Sediment would be disposed off-site in the appropriate landfill.

Precautions will be taken to minimize any impact on identified local endangered and threatened species. Also, activities will be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks, construction, and erosion and sediment control.

▪ ***Restore site and stream to pre-remediation conditions.***

Stream restoration would be performed once the contaminated sediment is removed.

▪ ***Conduct periodic monitoring of sediment and aquatic biota.***

Periodic monitoring of sediment would be conducted to enable assessment of PCB concentrations in sediment over time. In addition, monitoring of aquatic biota (fish sampling) would support future decisions regarding fish consumption advisories and protection of ecological receptors.

Capital Costs:	\$ 3,080,000
O & M Costs (Present Worth):	\$ 1,258,000
Contingency Costs:	\$ 651,000
Total Present Worth Costs:	\$ 4,989,000

Estimated Construction Timeframe: 5 months

Estimated Time to Achieve RAOs: 14 years after construction is completed

Alternative 5 - Excavation of Sediment in Reaches B, C, D, and Lower Brier Creek; Excavation/Dredging of Sediment from Brier Creek Reservoir and Lake Crabtree; Off-Site Disposal of Sediment/Soil; MNR in Lower Crabtree Creek and Institutional Controls

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Implement educational and community outreach programs.
- Conduct Five-year reviews.
- Conduct periodic monitoring of sediment and aquatic biota.
- Conduct pre-excavation sampling of sediment and endangered mussel study.
- Excavate sediment from Reaches B, C, D, and lower Brier Creek, and transport sediment off-site for appropriate disposal.
- Restore site and stream to pre-remediation conditions.
- *MNR in Lower Crabtree Creek*

Alternative 5 includes all the components of Alternative 4 in addition to dredging sediment from Brier Creek Reservoir and Lake Crabtree, and transport sediment off-site for appropriate disposal. MNR in this alternative would only be implemented in Lower Crabtree Creek.

- *Dredge sediment from Brier Creek Reservoir and Lake Crabtree, and transport sediment off-site for appropriate disposal.*

In this alternative sediment in the Brier Creek Reservoir and Lake Crabtree would be dredged and transported off-site for disposal.

PCB levels detected in Brier Creek Reservoir and Lake Crabtree are already in the low part per million (ppm) ranges. Therefore, for the purpose of this alternative, it is assumed that all of the sediment in Brier Creek Reservoir and Lake Crabtree would have to be removed to ensure that the availability of very low PCB levels is completely eliminated for ecological receptors.

Precautions will be taken to minimize any impact on identified local endangered and threatened species. Also, activities will be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks, construction, and erosion and sediment control.

Capital Costs:	\$ 468,910,000
O & M Costs (Present Worth):	\$ 1,509,000
Contingency Costs:	\$ 70,563,000
Total Present Worth Costs:	\$ 540,982,000

Estimated Construction Timeframe: 3 years

Estimated Time to Achieve RAOs: 12 years after construction is completed

11.0 COMPARATIVE ANALYSIS OF ALTERNATIVES

In this section, each alternative is assessed using nine evaluation criteria required under the NCP (NCP§300.430 (f)(5)(i)). Comparison of the alternatives with respect to these evaluation criteria is presented in summary form in the text of this section.

The NCP Criteria

Each alternative is evaluated using the nine criteria below:

1. Overall protection of human health and the environment
2. Compliance with Applicable or Relevant and Appropriate Requirements
3. Long-term effectiveness and permanence
4. Reduction of toxicity, mobility, or volume through treatment
5. Short-term effectiveness
6. Implementability.
7. Cost.
8. State/support agency acceptance
9. Community acceptance.

The required nine evaluation criteria above serve as the basis for conducting a comparative detailed analysis and selecting the remedy. The comparison is summarized by evaluation criteria in the next paragraphs.

- 1. Overall Protection of Human Health and the Environment** - Overall protection of human health and the environment addresses whether each alternative provides adequate protection of human health and the environment and describes how risks posed through exposure pathway are eliminated, reduced, or controlled through treatment, engineering controls, and/or institutional controls.

Alternative 1 would not be protective of human health or the environment because there are no actions to reduce or prevent exposure to contamination at OU 1. As such Alternative 1 is eliminated from consideration under the remaining eight criteria.

Alternative 2 and 3 would be more protective than Alternative 1 because implementation of fish advisories and signs reduce human exposure to contaminated fish. In addition through educational and community outreach programs the public is informed about the fish consumption advisories and the risks of consuming PCB-contaminated fish.

Alternatives 4 and 5 are more protective of the human health and the environment than Alternative 3, because these alternatives remove contaminated sediment with concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek, therefore reducing potential exposure to sediments with concentrations above this level. Modeling results show that

excavating sediment with PCB concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek will accelerate the natural recovery processes in sediment at Brier Creek Reservoir and Lake Crabtree.

Alternative 5 provides the greatest overall protection to human health and the environment because it would also remove contaminated sediment in Brier Creek Reservoir and Lake Crabtree. As a result, the time required to achieve the fish tissue PCB concentrations after completion of planning and construction activities may be less than the timeframe required in Alternative 4. However, due to the complexity of Alternative 5, the total time required for planning, design and implementation of this alternative would be considerable greater than Alternative 4.

With regards to protection of the environment, Alternative 3 may take a long time to achieve clean up goals. Alternatives 4 and 5 will achieve clean up goals in a shorter period of time than Alternative 3, but would destroy/disturb the habitat and aquatic biota in segments of the remediated streams in Alternatives 4 and 5, and the reservoir and lake areas in Alternative 5. Alternative 5 could also adversely impact threatened bald eagles foraging and breeding in the reservoir and lake areas. Therefore, the benefits of removing sediments must be weighed against the disruption or destruction of aquatic and biota habitats in and around the streams.

- 2. Compliance with ARARs** - Section 121(d) of CERCLA and NCP section 300.430(f)(1)(ii)(B) require that remedial actions at CERCLA sites at least attain legally applicable or relevant and appropriate Federal and State requirements, standards, criteria, and limitations which are collectively referred to as "ARARs," unless such ARARs are waived under CERCLA section 121(d)(4).

Alternative 2 would not meet the Chemical-specific ARARs because institutional controls prevent or minimize exposure, however, they do not reduce contamination to remediation goals

In Alternative 3, the chemical-specific ARAR of 1 mg/kg for PCBs may be met in the long-term for sediments in Reaches B, C, D, and lower Brier Creek through natural recovery processes. In Alternatives 4 and 5, chemical-specific ARARs of 1 mg/kg for sediments in Reaches B, C, D and lower Brier Creek will be met after excavation activities are completed.

Action-specific ARARs are not relevant for Alternatives, 2, and 3 because there are no active remedial actions associated with these alternatives. In Alternatives 4 and 5, all applicable action-specific ARARs would be met during the remedial actions. Measures will be taken to minimize any dust during excavation activities. In addition, for Alternative 5, any NPDES permit requirements will be met, if water from dewatering operations requires treatment prior to being discharged.

Location-specific ARARs are not relevant for Alternatives, 2, and 3 because there are no active remedial actions associated with these alternatives. In Alternatives 4 and 5, applicable location-

specific ARARs would be met. Precautions will be taken to minimize any impact on identified local endangered and threatened species. Also, activities will be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks (Umstead Park), construction, and erosion and sediment control.

3. Long-term Effectiveness and Permanence - Long-term effectiveness and permanence refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once clean-up levels have been met. This criterion includes the consideration of residual risk that will remain on site following remediation and the adequacy and reliability of controls.

In Alternatives 2, 3, 4 and 5, potential risks associated with fish consumption are expected to be lower because of the fish consumption advisories and signs.

In Alternative 3, risks to humans and the environment are expected to gradually decrease over time with the reduction of PCB concentrations in sediment through natural processes and will be documented by a long term monitoring program. PCB concentrations in fish are also expected to decline with the decrease of PCB concentrations in sediment.

In Alternatives 4 and 5, the removal of sediments to levels below 1 mg/kg PCB from Reaches B, C, D, and lower Brier Creek will reduce any potential risks associated with sediment exposure. In Alternative 4, once the sediments with PCB concentrations above 1 mg/kg are removed from these areas, the natural recovery process of Brier Creek Reservoir, Lake Crabtree, and beyond would speed up.

In addition to sediment removal from the streams, Alternative 5 would also remove sediments in Brier Creek Reservoir and Lake Crabtree. As a result, the time required to achieve acceptable fish tissue PCB concentrations after completion activities may be less than the timeframe required in Alternative 4. However, due to the complexity of Alternative 5, the total time required for planning, design and implementation of this alternative would be considerable greater than Alternative 4.

In Alternative 5, if dredging is used, due to technology limitations, some dredging residuals levels will remain in the reservoir and lake, including low levels of PCB contamination in the biologically active sediment zone. PCBs in dredging residuals could impact fish concentrations in the reservoir and lake for many years after completion of the dredging operations.

In addition, the large-scale excavation/dredging operations in Brier Creek Reservoir and Lake Crabtree in Alternative 5 will disturb or destroy benthic and other aquatic biota and habitats in the reservoir and the lake. The dredging/excavation activities of Alternative 5 could adversely impact threatened bald eagles within the reservoir and lake areas for foraging and breeding. Over the long term, re-establishments of these habitats may be difficult.

4. **Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment** refers to the anticipated performance of the treatment technologies that may be included as part of the remedy.

EPA will use treatment to address site contaminants wherever practicable; however, because of the relatively low levels of PCBs in the sediments within OU1, treatment is not proposed for any of the alternatives. Therefore the statutory preference for treatment is not met.

5. **Short-term Effectiveness** addresses the period of time needed to implement the remedy and any adverse impacts that may be posed to workers, the community and the environment during construction and operation of the remedy until cleanup levels are achieved.

Alternatives 2 and 3 do not involve any active remedial action; therefore, they would not pose any additional risks to the community or workers during implementation, nor would they result in any adverse environmental impacts.

In Alternative 3, under current conditions (assuming that the Removal Action at the Ward Transformer facility and Reach A is completed before commencement of OU1 activities), modeling indicates that PCB concentrations in sediments at Brier Creek Reservoir and Lake Crabtree may take more than 30 years to decline to levels that correspond to acceptable PCB levels in fish.

In Alternatives 4 and 5, the potential for additional risks to the community may exist due to dust and excessive noise from the construction of access roads, construction equipment, and vehicular traffic to the off-site disposal facility. Risks to the community will be minimized by establishing buffer zones around the work areas, limiting work hours, and using dust-suppressing techniques. Risks to the environment may include clearing of vegetation and trees for access roads and excavation/dredging equipment. Measures will be taken to minimize the impact on the environment by avoiding the wetlands and floodplain areas to the extent possible. There will be adverse impacts to the stream and lake habitats due to the sediment removal activities, especially for benthic and other aquatic organisms. Many of these organisms may be disturbed or destroyed during the excavation/dredging activities. The presence or absence of threatened or endangered mussel species needs to be established prior to commencing intrusive activities. If threatened or endangered mussel species are identified, additional safeguards will need to be put into place to protect these species. In addition, the potential for adverse impacts to threatened bald eagles utilizing areas within OU1 as foraging and breeding habitat exists and precautions would be required to minimize these potential impacts. Due to the larger extent and complexity of excavation/dredging activities associated with Alternative 5, all the above-mentioned impacts will be much greater for Alternative 5 than Alternative 4.

In Alternative 4, the estimated time required to complete the remediation work is 3 to 5 months. The estimated time required to attain acceptable PCB concentrations in fish tissue at the Brier

Creek Reservoir is approximately 14 years. The time required to attain acceptable PCB concentrations in fish tissue at Lake Crabtree is approximately 9 years.

Due to the complexity of Alternative 5, it is estimated that planning, design and implementation of this alternative would require a considerably greater amount of time than Alternative 4. In addition, it is estimated that any dredging activities associated with Alternative 5 would take at least 3 years to complete after all design and planning documents are completed.

In Alternative 5, the estimated time required to attain acceptable PCB concentrations in fish tissue at the Brier Creek Reservoir is approximately 12 years after the completion of excavation/dredging. The time required to attain acceptable PCB concentrations in fish tissue at Lake Crabtree is expected to be 8 years.

As a result, removing larger amounts of sediments in Alternative 5 does not necessarily correspond to a shorter amount of time to achieve clean up goals than in Alternative 4.

6. Implementability addresses the technical and administrative feasibility of the remedy from design to construction and operation. Factors such as the relative availability of services and materials, administrative feasibility, and coordination with other government entities are also considered.

Alternatives 1, 2, and 3 can be easily implemented because there is no construction, involved. Alternatives 1 and 2 can be easily implemented because there are no monitoring activities.

In Alternatives 2, 3, 4 and 5, the North Carolina fish consumption advisories and signs are already in place although additional advisories and signs may be necessary. In Alternatives 3, 4 and 5, reduction in PCB concentrations in sediment and fish will be determined through the periodic monitoring program, which can be easily implemented.

Alternative 4 is technically feasible to implement. Contractors are readily available for construction of access roads, excavation, and off-site disposal. Coordination with other agencies and obtaining approvals and permit equivalencies for excavation, transport of excavated materials, etc. will be required.

The implementation of Alternative 5 is much more complex and difficult than Alternative 4, and it will require much more time. In addition to all the components that are included in Alternative 4, dredging of sediments at Brier Creek Reservoir and Lake Crabtree is included in Alternative 5. Dredging is a specialized technology, which requires advanced planning, selection of the proper dredging method, and detailed remedial design. Dewatering and treatment of water are also significant design and cost components of the dredging alternative.

During the implementation of Alternatives 4 and 5, a pre-remediation mussel study will be conducted to determine if the endangered/threatened species exists in the streams to be

excavated. Consultation with the respective federal and state agencies will be required prior to the commencement of the excavation activities.

Some portions of OU1 consist of wetlands and floodplains. Coordination with federal agencies will be required to ensure that the impact on these areas will be minimal. Threatened bald eagles nest at Lake Crabtree and forage at Lake Crabtree and Brier Creek Reservoir. State endangered/threatened mussel species have been reported in the nearby Umstead State Park, which is part of the Crabtree Creek watershed.

The Crabtree Creek Recreational Demonstration Area (Umstead State Park) is a historical site listed in the National Register of Historic Places. Precautionary measures will be taken to minimize harm to historic property to the extent practicable during remedial actions conducted in this area and in the vicinity. Consultation with federal and state historic and archeological agencies will be necessary before initiating any activities in the vicinity of this area.

7. **Costs** include estimated capital and annual operations and maintenance (O&M) costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. A discount rate of 4 % was assumed for O&M cost.

There are no capital costs associated with Alternative 1. However, 5-year reviews will be conducted, as required by CERCLA. For costing purposes, it is assumed that 5-year reviews would be conducted for 30 years.

For Alternative 2, in addition to the 5-year review, yearly operation and maintenance costs for community outreach and educational programs are included for 30 years. The estimated cost of implementing new advisories and signs and maintaining existing or new advisories and signs has also been included. For Alternative 3, all the costs in Alternative 2 plus yearly MNR monitoring costs are included for 30 years.

Alternative 4 includes the same costs associated with Alternative 3 plus the capital costs associated with excavation and off-site disposal of sediment from Reaches B, C, D, and lower Brier Creek (because remedial actions would last for less than 6 months, there are no recurring costs associated with this alternative). Capital costs of remediation include pre-remediation sampling, mobilization/demobilization, construction of access roads, temporary staging areas, excavation, off-site transport and disposal, and site restoration.

For Alternative 5, in addition to the costs associated with Alternative 4, dredging and off-site disposal of sediments in Brier Creek Reservoir and Lake Crabtree are included. There are additional components related to dredging operations, for example, dewatering and effluent treatment.

For Alternatives 4 and 5, the MNR monitoring costs were included for only 15 years, because it is expected that the clean up levels would be met in less than 15 years.

The estimated present-worth costs for the remedial alternatives are summarized below:

Alternative 1: \$ 332,000
Alternative 2: \$ 476,000
Alternative 3: \$ 2,247,000
Alternative 4: \$ 4,989,000
Alternative 5: \$ 540,982,000

Alternative 5 would be extremely expensive, considering the large volume of sediments to be removed. According to modeling results, the time difference in achieving the clean up levels associated with fish consumption in Alternative 4 and 5 is only a few years. But due to the complexity of Alternative 5, it is estimated that planning, design, and implementation of this alternative would require a considerably greater amount of time than Alternative 4. Therefore, removing a larger amount of sediments does not necessarily correspond to a shorter amount of time to achieve clean up goals. Based on the foregoing, it would be far more cost-effective to consider Alternative 4 over Alternative 5.

The detailed costs estimates are presented in the OU1 Feasibility Study report.

8. State/Support Agency Acceptance considers whether the State agrees with the EPA's analyses and recommendations, as described in the RI/FS and Proposed Plan.

The Superfund Division of NC DENR (North Carolina Department of Environment and Natural Resources) reviewed all site-related documents and provided EPA with comments. NC DENR reviewed the Proposed Plan Fact Sheet, attended the Proposed Plan public meeting that was held in Raleigh on August 14, 2007, and reviewed a draft version of this ROD. The State concurs with the Selected Remedy. A copy of the concurrence letter is included in Appendix C.

9. Community Acceptance

The RI/FS report and Proposed Plan for the Ward Transformer Superfund Site were made available to the public in August 2007. They can be found in the Administrative Record file and the information repository maintained in the EPA Docket Room at EPA Region 4 in Atlanta, Georgia, and at the North Regional Public Library in Raleigh, North Carolina. The notice of availability of these two documents was published in the Durham Herald on August 6, 2007, and the Raleigh News and Observer on August 8, 2007. A public comment period was held from August 6, 2007, to September 4, 2007. An extension to the public comment period was requested. As a result, the comment period was extended to October 4, 2007. In addition, a public meeting was held on August 14, 2007, to present the proposed plan to a broader community audience than those that had already been involved at the site. At this meeting, representatives from the EPA and NC DENR answered questions about the Site and the remedial

alternatives. EPA's response to the comments received during this period is included in the Responsiveness Summary.

12.0 PRINCIPAL THREAT WASTE

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP §300.430(a)(1)(iii)(A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants or contaminants that act as a reservoir for migration of contamination to ground water, surface water, or air, or acts as source for direct exposure. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur. While PCBs are considered to be toxic, the main source material or principal threat waste (contaminated soil at the Ward Transformer facility) is being addressed under a time-critical removal using excavation and on-site thermal desorption treatment. Principal threat wastes are not present in this OU and therefore are not addressed by this action.

13.0 SELECTED REMEDY

13.1 Remedy Description

The Selected Remedy is a modified Alternative 4. Alternative 4 was modified as described in Section 15 of this ROD. The Selected Remedy includes the following components:

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Implement educational and community outreach programs.
- Conduct pre-excavation sampling of sediment and floodplain soil.
- Conduct a pre-excavation endangered mussel evaluation study.
- Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.
- Restore site and stream to pre-remediation conditions.
- Implement Monitor Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.
- Conduct periodic monitoring of sediment and aquatic biota.
- Implement Institutional Controls.
- Conduct Five-year reviews.

A description of each component is provided below:

- ***Continue or enhance existing fish consumption advisories and signs.***

Fish consumption advisories and signs would continue to be in place until PCB concentrations in fish are below the remediation goal (0.05 mg/kg). This component of the remedy would also include the implementation and posting of additional fish consumption advisories and signs, or any modifications to the existing ones, as needed. The continuance or enhancement of fish advisories and signs would help reduce the potential risks to humans through fish consumption.

- ***Implement educational and community outreach programs.***

Educational and community outreach programs would be developed and implemented to inform the public of the fish consumption advisories. These activities would include conducting meetings, interviews, surveys, etc.; and distribution of pamphlets or any other information material, etc. These activities should be focused on groups such as sports fishermen and local communities that commonly rely on fish consumption for part of their diets.

As part of the remedial design, an implementation plan to comply with this component of the remedy would be developed. Coordination between the appropriate stakeholders would be necessary to develop and implement this plan. The plan would define the goals, roles, duties and responsibilities of the parties involved and the means used to achieve or enforce the intended goals. Educational and community outreach programs would continue until remediation goals are achieved.

- ***Conduct pre-excavation sampling of sediment and floodplain soil.***

A pre-excavation floodplain soil and sediment sampling program would be developed and implemented. The PCB concentrations of sediment/soil samples collected at specific locations in prior years may not represent the PCB concentrations at the time when remediation commences due to the dynamic nature of stream sediments/soil and due to naturally occurring processes. In addition, floodplain soil and sediment samples would be required to accurately delineate the extent of PCB contamination prior to the commencement of remedial actions. Floodplain soil and sediment sampling for PCBs may be conducted along transects (three locations per transect) at 50-foot intervals along the length of Reaches B, C, and D, and at 100-foot intervals along the lower Brier Creek. Based on the results of this sampling program, excavation areas would be defined.

- ***Conduct a pre-excavation endangered mussel evaluation study.***

A mussel survey and evaluation study would be conducted to determine if threatened/endangered mussel species are present in the areas selected for remediation.

- ***Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.***

Based on the results of the pre-excavation sampling program, sediments and flood plain soil from Reaches B, C, D, and lower Brier Creek will be excavated to levels below 1 mg/kg. Excavated sediments/soil will be transported and properly disposed of off-site. An excavation verification plan will be developed as part of the Remedial Design. Verification samples will be collected to ensure the 1 mg/kg remediation goal is achieved.

Prior to the excavation of stream sediments, sections of the stream flow could be blocked off and water could be bypassed through pipes running parallel to the blocked stream section. Major activities associated with this alternative would include stream diversion, construction of access roads to transport equipment and haul excavated material, excavation of sediments/soil, construction of temporary staging areas, transport excavated sediment/soil off-site to be disposed properly, and conduct verification sampling.

Precautions would be taken to minimize any impact on identified local endangered and threatened species. Also, activities would be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks, construction, and erosion and sediment control.

- ***Restore site and stream to pre-remediation conditions.***

All disturbed areas would be restored to pre-remediation conditions. This includes replenishment of areas where sediment and soil was removed, restoration of areas that were disturbed during remediation activities, including temporary staging areas, and areas cleared for access roads.

- ***Implement Monitor Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.***

Monitor Natural Recovery, which allows natural processes to achieve remediation goals would be implemented in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek. MNR is a sediment remedy that uses ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment, thereby reducing potential risks to human and/or ecological receptors.

Periodic monitoring of sediment would be conducted to assess PCB concentrations in sediment over time. In addition, monitoring of aquatic biota (fish sampling) would be conducted to support future decisions regarding fish consumption advisories. An MNR sampling program would be developed and implemented in accordance with EPA sediment guidance for evaluating Natural Recovery remedies to document lines of evidence of natural recovery in sediment. MNR would be conducted until remediation goals are achieved.

- ***Conduct periodic monitoring of sediment and aquatic biota.***

Periodic monitoring of sediment and aquatic biota (fish sampling) would be conducted. A monitoring program would be developed to assess the remedy and support future decisions regarding fish consumption advisories and protection of ecological receptors. Periodic monitoring would be conducted until remediation goals are achieved.

- ***Implement Institutional Controls.***

Institutional Controls would be implemented to ensure the integrity and protectiveness of the remedy. Continue or enhance existing fish consumption advisories and signs was identified as an institutional control measure appropriate for the Site. Other institutional control measures might be identified and implemented.

- ***Conduct Five-year reviews.***

Five-year reviews would be conducted to evaluate the implementation and performance of the Selected Remedy, and in order to determine if the remedy continues to be protective of human health and the environment. Five year reviews would be conducted as required under CERCLA.

13.2 Summary of the Rationale for the Selected Remedy

The Selected Remedy is protective of the human health and the environment because removes PCB contaminated sediment with concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek, therefore reducing potential exposure to contaminated sediment. In addition the Selected Remedy would remove any flood plain soil with PCB concentrations above 1 mg/kg along Reaches B, C, D, and lower Brier Creek, which would reduce potential exposure to contaminated soil, and would eliminate another potential source of PCB.

The Selected Remedy uses Monitor Natural Recovery (MNR) which would allow natural processes to achieve remediation goals in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek. The remedy would reduce the bioavailability of contaminants in sediment, thereby reducing potential risks to ecological receptors. MNR is especially effective at sites such as this one where the main source of contamination would be removed and current levels of PCBs in sediment are low enough. The on-going time-critical removal action would accomplish source removal; and remediation of sediment and flood plain soil along Reaches B, C, D, and lower Brier Creek would reduce the amount of PCBs moving downstream. These actions would support MNR, and eventually reduce sediment PCB concentrations within the biologically active zone in Brier Creek Reservoir and Lake Crabtree to levels which will support the reduction of PCB concentrations in fish and other aquatic biota.

Institutional controls, like the continuance or enhancement of fish advisories and signs, and the implementation of educational and community outreach programs, would help reduce the potential risks to humans through fish consumption.

The estimated time required to achieve the remediation goal in fish tissue (0.05 mg/kg) at the Brier Creek Reservoir would be approximately 14 years; and in Lake Crabtree would be approximately 9 years.

The Selected Remedy would comply with all Applicable or Relevant and Appropriate Requirements (ARARs).

13.3 Summary of the Estimated Remedy Costs

A summary of the estimated costs of the Selected Remedy is:

Capital Costs:	\$ 4,072,000
O & M Costs (Present Worth):	\$ 1,258,000
Contingency Costs:	\$ 800,000
Total Present Worth Costs:	\$ 6,130,000

A more detailed breakdown of the estimated costs is presented in Table 16.

13.4 Expected Outcomes of the Selected Remedy

The removal of sediments and floodplain soil with PCB concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek will eliminate the risks to humans and ecological receptors through direct exposure to soil/sediments and these areas should be available for unrestricted use.

Risks associated with fish consumption would not be eliminated immediately after the remedial actions, but modeling results indicate that once the removal action is completed at the facility and the sediments and floodplain soil with PCB concentrations above 1 mg/kg are removed from the streams (Reaches B, C, D, and lower Brier Creek), the PCB concentrations in the sediments that migrate downstream to Brier Creek Reservoir, Lake Crabtree, and lower Crabtree Creek would be low enough to support natural recovery of the sediments and reduce even more the bioavailability of PCBs to fish. Once PCB concentrations in fish tissue achieve levels below the fish tissue cleanup goal of 0.05mg/kg, all OU1 areas would be available for unrestricted use and within acceptable risk levels for unlimited exposure for human and ecological receptors.

Table 16
SELECTED REMEDY COST ESTIMATE

Task	Quantity	Units	Unit Cost	Total Cost
A. Capital Costs				
(1) Pre-remediation Sampling				
Sediment, soil, biota & surface water sampling (labor & travel)	600	HR	\$60	\$36,000
Sampling equipment, containers, shipping, etc.	1	LS	\$3,000	\$3,000
Sampling and Analysis				
PCB (sediment)	800	EA	\$100	\$80,000
PCB (soil)	800	EA	\$100	\$80,000
Data Validation	1,600	EA	\$20	\$32,000
Report Preparation	640	HR	\$100	\$64,000
Report production (word processing, graphics, printing)	1	LS	\$5,000	\$5,000
Subtotal				\$300,000
(2) Plans				
Health and Safety Plan	1	LS	\$3,800	\$3,800
QA/QC Plan	1	LS	\$7,400	\$7,400
Coordination and meetings	1	LS	\$9,600	\$9,600
Final report	1	LS	\$12,250	\$12,250
Permits	1	LS	\$27,500	\$27,500
Subtotal				\$60,550
(3) Mobilization/demobilization				
Mobilization/demobilization	1	LS	\$5,500	\$5,500
Survey and stake-out	1	LS	\$13,200	\$13,200
Facilities setup and Temporary Stockpile Area	1	LS	\$25,000	\$25,000
Subtotal				\$43,700
(4) Reach B Remediation				
Stabilized construction entrances	1	LS	\$3,800	\$3,800
Gravel haul road	1,740	LF	\$35	\$60,900
Stream diversion	1	LS	\$7,400	\$7,400
Excavation	1,966	CY	\$22	\$43,252
Backfill	1,966	CY	\$35	\$68,810
Site Restoration	0	AC	\$20,000	\$8,000
Transport and disposal	2,949	TN	\$90	\$265,410
Subtotal				\$457,572
(5) Reach C Remediation				
Stabilized construction entrances	1	LS	\$5,000	\$5,000
Gravel haul road	2,300	LF	\$35	\$80,500
Stream diversion	1	LS	\$9,000	\$9,000
Excavation	2,021	CY	\$22	\$44,462
Backfill	2,021	CY	\$35	\$70,735
Site Restoration	1	AC	\$20,000	\$10,600
Transport and disposal	3,032	TN	\$90	\$272,835
Subtotal				\$493,132

Table 16 (con't)

Task	Quantity	Units	Unit Cost	Total Cost
(6) Reach D Remediation				
Stabilized construction entrances	1	LS	\$5,000	\$5,000
Gravel haul road	4,400	LF	\$35	\$154,000
Stream diversion	1	LS	\$9,500	\$9,500
Excavation	6,076	CY	\$25	\$151,900
Backfill	6,076	CY	\$35	\$212,660
Site Restoration	1.01	AC	\$20,000	\$20,200
Transport and disposal	9.114	TN	\$90	\$820,260
Subtotal				\$1,373,520
(7) Lower Brier Creek Remediation				
Stabilized construction entrances	1	LS	\$5,000	\$5,000
Gravel haul road	9,200	LF	\$35	\$322,000
Stream diversion	1	LS	\$10,600	\$10,600
Excavation	3,046	CY	\$25	\$76,150
Backfill	3,046	CY	\$35	\$106,610
Site Restoration	2.11	AC	\$20,000	\$42,200
Transport and disposal	4,569	TN	\$90	\$411,210
Subtotal				\$973,770
Total				<u>\$3,702,244</u>

B. O&M Costs

(1) Fish advisories (annually for 15 years)

Implementation of Fish Advisories (already in place)	NA	NA	\$0	\$0
Yearly partial replacement of fish advisory sign posts	10	EA	\$200	\$2,000
Subtotal				\$2,000

(2) Educational and community programs (yearly)

Pamphlets, newspaper advertisements, public meetings, community outreach programs, etc.	1	LS	\$5,000	\$5,000
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(3) 5-Year Review (cost per event)

Note: Separate cost for 5-year sampling has not been included. Sampling results from MNR will be used instead.

Report Preparation	160	HR	\$100	\$16,000
Report production (word processing, graphics, printing)	1	LS	\$5,000	\$5,000
Subtotal				\$21,000

(4) Periodic Sampling Yearly (MNR; Sediment and Aquatic Biota)

Sediment, biota & surface water sampling (labor & travel)	300	HR	\$60	\$18,000
Sampling equipment, containers, shipping, etc.	1	LS	\$5,000	\$5,000
Sampling and Analysis				
PCB and TOC (sediment) - normal detection limit*	30	EA	\$100	\$3,000
PCB and TOC (sediment) - low detection limit**	51	EA	\$200	\$10,200
PCB and Lipid (biota)	122	EA	\$200	\$24,400
PCB (surface water)	10	EA	\$200	\$2,000
Data Validation	213	EA	\$20	\$4,260
Report Preparation	200	HR	\$100	\$20,000
Report production (word processing, graphics, printing)	1	LS	\$3,000	\$3,000
Subtotal (per event)				\$89,860

* Reaches B. C. and D. and Lower Brier Creek

** Brier Creek Reservoir and Lake Crabtree

Table 16 (con't)

SELECTED REMEDY COST SUMMARY

Tasks	Item Cost	Total Cost
<u>A. Capital Costs</u>		
(1) Pre-remediation Sampling	\$300,000	
(2) Plans	\$60,550	
(3) Mobilization/demobilization	\$43,700	
(4) Reach B Remediation	\$457,572	
(5) Reach C Remediation	\$493,132	
(6) Reach D Remediation	\$1,373,520	
(7) Lower Brier Creek Remediation	\$973,770	
		\$3,702,244
<u>B. O&M Costs</u>		
Note: A discount rate of 4% was assumed for O&M.		
(1) Fish advisories (yearly, for 15 years)	\$22,237	
(2) Educational and community programs (yearly, for 15 years)	\$55,592	
(3) 5-Year Review (conducted in years 5, 10, 15, 20, 25, and 30)	\$67,044	
(4) Periodic Sampling (MNR; Sediment and Aquatic Biota, yearly for 15 years)	\$999,098	
	Total O&M Cost	\$1,143,971
	Subtotal of Capital and O&M Costs	\$4,846,215
Engineering and Administrative Costs (10%)		\$484,622
	Subtotal	\$5,330,837
Contingency (15%)		\$799,625
TOTAL PRESENT WORTH COST OF SELECTED REMEDY		\$6,130,462

14.0 STATUTORY DETERMINATIONS

The Selected Remedy satisfies the requirement of Section 121 of CERCLA, 42 U.S.C. § 9621, and to the extent practicable, the NCP § 300.430, 40 Code of Federal Regulations (CFR) § 300.430.

The Selected Remedy is protective of human health and the environment, will comply with the identified ARARs of other environmental statutes, will be cost effective, and will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.

14.1 Protection of Human Health and the Environment

The remedy for this Site will adequately protect human health and the environment by eliminating, reducing, or controlling exposures to human health and environmental receptors through excavation of contaminated sediments and soil, monitored natural recovery and institutional controls. Fish consumption advisories issued by the State of North Carolina will remain in effect until contaminant concentrations in fish are below remediation goals.

14.2 Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

The remedy would be designed to comply with all ARARs under federal and state laws. Chemical-, location-, and action-specific ARARs are listed in Tables 17, 18 and 19.

14.3 Cost Effectiveness

The Selected Remedy is cost effective and represents a reasonable value for the money to be spent. In making this determination, the following definition was used: "A remedy shall be cost-effective if its costs are proportional to its overall effectiveness" (NCP §300.430(f)(1)(ii)(D)). This was accomplished by evaluating the "overall effectiveness" of those alternatives that satisfy the threshold criteria (i.e., were protective of human health and the environment and ARAR compliance). Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination: (1) Long-term effectiveness and permanence; (2) Reduction in toxicity, mobility and volume (TMV) through treatment; and, (3) Short-term effectiveness. Overall effectiveness was then compared to costs to determine cost-effectiveness. The relationship of the overall effectiveness of the Selected Remedy was determined to be proportional to its costs and hence represent a reasonable value for the money to be spent.

The estimated present worth costs for the Selected Remedy is \$6,130,462.

Table 17

Chemical-Specific ARARs

Regulation	Citation	Criterion/Standard	Applicability/ Appropriateness	Actions to be Taken to Attain ARARs
Toxic Substances Control Act (TSCA)	40 CFR 761	TSCA regulates several chemical constituents (including PCBs) at levels that represent a significant risk to human health or the environment. Specifically, PCB regulations that regulate the disposal of material (such as soil and sediment) that contain PCBs at levels >50 ppm or have resulted from a known spill of PCB liquid containing >50 ppm PCB.	Applicable. PCBs found in soils and sediments within OUI are an order of magnitude less than 50 ppm. However, additional sampling will be conducted, and PCB with levels above 50 ppm may exist. TSCA regulations are applicable to the Selected Remedy because it involves removal of PCB-contaminated sediment/soil.	Remedial actions will be conducted in accordance with applicable portions of TSCA requirements for PCBs. Sediments/soil with PCB concentrations above 1 ppm will be excavated and transported off-site in accordance with TSCA regulations.
North Carolina Health-Based Soil Remediation Goals	15A NCAC 13C.0300	The State of North Carolina has developed health-based remediation goals for the inactive sites for selected chemicals. The PCB soil remediation goal is based on the EPA policy for cleanup of PCBs at Superfund sites. The soil remediation goal for PCBs is 1 ppm.	Applicable. The Selected Remedy involves removal of PCB-contaminated sediments.	Sediments/soil with PCB concentrations above 1 ppm will be excavated and transported off-site.

Table 18

Action-Specific ARARs

Regulation	Citation	Criterion/Standard	Applicability/ Appropriateness	Actions to be Taken to Attain ARARs
TSCA Regulations for PCB Remediation Waste	40 CFR 761.61(c)	TSCA regulates the disposal of PCB remediation waste by methods including containing, transporting, destroying, degrading, or confining PCBs.	Applicable. PCBs found in soils and sediments within OUI are an order of magnitude less than 50 ppm. However, additional sampling will be conducted, and PCB with levels above 50 ppm may exist. TSCA regulations are applicable to the Selected Remedy because it involves removal of PCB-contaminated sediment/soil.	Applicable portions of the regulations will be met.
	40 CFR 761.79	Establishes decontamination standards and procedures for removing PCBs from non-porous surfaces.	Applicable.	Decontamination activities will be conducted in accordance with the specified requirements.
The Clean Air Act (CAA)	40 CFR 50	Air quality requirements are specified for sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, lead, and particulate matter.	Potentially applicable to activities that involve dust emissions (e.g., excavation, road construction).	Measures will be taken to minimize dust emissions (e.g., spraying water)
Clean Water Act	40 CFR 403	Establishes effluent standards for direct and non-direct point source discharges.	Potentially applicable if treated water from dewatered sediments is discharged to surface water.	Appropriate effluent standards will be met.
	National Pollution Discharge Elimination System (NPDES) (40 CFR 122, 125)	Establishes NPDES discharge limitations based on Best Available Technology (BAT), and Best Management Practices (BMP).	Potentially applicable if treated water from dewatered sediments is discharged to surface water.	BAT and BMP requirements will be met.

Table 18**Action-Specific ARARs**

Regulation	Citation	Criterion/Standard	Applicability/ Appropriateness	Actions to be Taken to Attain ARARs
North Carolina Water Pollution Control Regulations	15A NCAC 2B 15A NCAC 2H	State version of the federal NPDES program. Establishes requirements for wastewater discharge to surface water and wastewater treatment.	Applicable to treated water from dewatered sediments is discharged to surface water.	Appropriate effluent standards will be met.
North Carolina Water and Air Resources Act	NC G.S. Ch 143, Articles 21, 21B. 15A NCAC 2L.0202	Chapter 15A Section 02L.0202 of the NCAC specifies groundwater quality standards for the protection of groundwater of the state through maximum allowable concentrations resulting from any discharge of contaminants to the land or waters. Chapter 15A Section 2D.0540 of the NCAC establishes requirements for fugitive non-process dust emissions.	Applicable to discharge of treated water to ground or surface water. Potentially applicable for alternatives that involve dust emissions (e.g., excavation, temporary road construction).	Maximum allowable concentrations will be met if water is discharged to ground or surface water. Precautionary measures will be taken to minimize dust emissions.
North Carolina Sedimentation Control Act of 1973	15A NCGS 113A, Article 4 15 NCAC 2B	Specifies requirements associated with activities that involve land disturbance activities and activities in lakes and natural water courses.	Applicable to access road construction, excavation, or dredging activities.	An erosion and sedimentation control plan will be submitted. Appropriate measures will be taken to minimize the impact on the environment as required.
North Carolina Solid Waste Management Regulations	NCGS 130A, Article 9	Establishes requirements for the management of non-hazardous solid waste	Applicable to transport and disposal of excavation or dredging materials	

Table 19
Location-Specific ARARs

Regulation	Citation	Requirements	Applicability/Appropriateness	Actions to be Taken to Attain ARARs
Endangered Species Act	16 USC 1531 et seq. 40 CFR 6.302(h)	Under this act, federal agencies are prohibited from jeopardizing threatened or endangered species or adversely modifying habitats essential to their survival.	<p>Applicable. Bald eagle has been recorded within 1 to 2 miles from the site.</p> <p>Endangered bald eagles are nesting at Lake Crabtree and foraging at Lake Crabtree and Brier Creek Reservoir. The state endangered Atlantic pigtoe mussel and the state threatened squawfoot mussel have been reported in the nearby Umstead State Park, which is part of the same Crabtree Creek watershed. These species could potentially be present in the unnamed tributary to Little Brier Creek.</p> <p>Potentially applicable.</p>	Remediation activities will be conducted in accordance with the Endangered Species Act requirements.
Fish and Wildlife Coordination Act	16 USC 661 et seq. 40 CFR 6.302(g)	Requires federal agencies involved in actions that will result in the control or structural modification of any natural stream or body of water for any purpose, to take action to protect the fish and wildlife resources which may be affected by the action.	Potentially applicable.	Remediation activities will be in consultation with appropriate wildlife agencies.

Table 19
Location-Specific ARARs

Regulation	Citation	Requirements	Applicability/Appropriateness	Actions to be Taken to Attain ARARs
Protection of Wetlands	Executive Order 11990 40 CFR 6.302(a)	Requires federal agencies conducting certain activities to avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practicable alternative exists.	Potentially applicable. Portions of the Ward Transformer Site (OUI) are classified as wetlands.	Measures will be taken to minimize and mitigate any adverse impacts. Erosion and sedimentation control measures will be adopted during remediation activities.
Floodplain Management	Executive Order 11988 40 CFR 6.302(b)	Requires federal agencies to evaluate the potential effects of actions they may take in a floodplain to avoid, to the extent possible, adverse effects associated with direct and indirect development of a floodplain.	Potentially applicable. Parts of the Ward Transformer Site (OUI) consist of floodplains.	Measures will be taken to minimize adverse effects associated with direct and indirect development of a floodplain.
Preservation of Historical and Archaeological Data Act and National Historic Preservation Act	16 USC 469 et seq. 36 CFR Part 65 16 USC 470 et seq. 36 CFR Part 800	Recovery and preservation of historical and archaeological data. Also requires measures to minimize harm to historic resources.	Crabtree Creek Recreational Demonstration Area (also known as Umstead State Park) is a historical site listed in the National Register of Historic Places. Potentially applicable to activities at or in the vicinity of the historic location.	Precautionary measures will be taken to minimize harm to the historic property to the extent practicable.

Table 19
Location-Specific ARARs

Regulation	Citation	Requirements	Applicability/Appropriateness	Actions to be Taken to Attain ARARs
North Carolina Requirements During Minor Construction Activities	15A NCAC 01C .0408	This rule sets out the general and specific minimum criteria for construction activities. Construction and land-disturbing activities fall under both the general minimum criteria and any specific minimum criteria applicable to the project.	Potentially applicable.	Appropriate measures will be taken as required to minimize the impact from land-disturbing activities and comply with the requirement.
North Carolina Sedimentation/Erosion Control Regulations	15A NCAC 04B .0105-.0109	This rule establishes the sedimentation and erosion control pertaining to: <ul style="list-style-type: none"> ▪ Protection of property (04B.0105). ▪ Basic control objectives (04B.0106). ▪ Mandatory standards for land-disturbing activity (04B.0107). ▪ Design and performance standards (04B.0108). ▪ Stormwater outlet protection (04B.0109). 	Potentially applicable.	Appropriate erosion and sedimentation control measures will be taken during excavation and removal activities as required.
North Carolina Management of Isolated Wetlands and Waters	15A NCAC 02H.1301	This rule pertains to the disposition of dredged or fill material in isolated wetlands or waters of the State	Potentially applicable	

14.4 Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable

EPA and NC DENR have determined that the Selected Remedy represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a cost-effective manner, given the specific conditions at the Site. Of those alternatives that are protective of human health and the environment and comply with ARARs, EPA and NC DENR have determined that the Selected Remedy provides the best balance of trade-offs in terms of long-term effectiveness and permanence, reduction of toxicity, mobility, or volume, short-term effectiveness, implementability, and cost, while also considering State and community acceptance.

14.5 Preference for Treatment as a Principal

While the Selected Remedy for OU1 does not meet this criterion, the low PCB levels in the sediment and floodplain soil would require excavation but may not require treatment prior to disposal. In addition, this OU does not address the main source material. The main source material or principal threat waste (PCB contaminated soil at the Ward Transformer Facility) at the Site is being addressed through a time critical removal action using thermal desorption. For this OU the combination of excavation and off site disposal, together with natural processes should effectively achieve remediation goals without the need for treatment.

14.6 Five Year Review Requirements

NCP §300.430(f)(4)(ii) requires a five-year review if a remedial action results in hazardous substances, pollutants, or contaminants remaining onsite above levels that allow for unlimited use and unrestricted exposure. The remedy for OU 1 at the Ward Transformer Superfund Site will not result in contaminants remaining on site above levels that allow for unlimited use and unrestricted exposure. However, the remedy will take longer than five years to achieve unlimited use and unrestricted exposure. As such, as a matter of policy EPA will conduct a Five-year review until levels that allow for unlimited use and unrestricted exposure are achieved. The first Five-Year Report should be completed five years from the date the Preliminary Close-Out Report (PCOR) is issued.

15.0 DOCUMENTATION OF SIGNIFICANT CHANGES

Section 117(b) of CERCLA requires an explanation of any significant changes from the preferred alternative presented to the public. The Proposed Plan Fact Sheet was released to the public in August 2007. Alternative 4 was presented to the public as EPA preferred alternative. The components of Alternative 4, as presented to the public, are described in Section 10 of this ROD. Based on the comments received during the comment period, the following changes were made

to Alternative 4. The Selected Remedy as described in Section 13 of this ROD includes these changes.

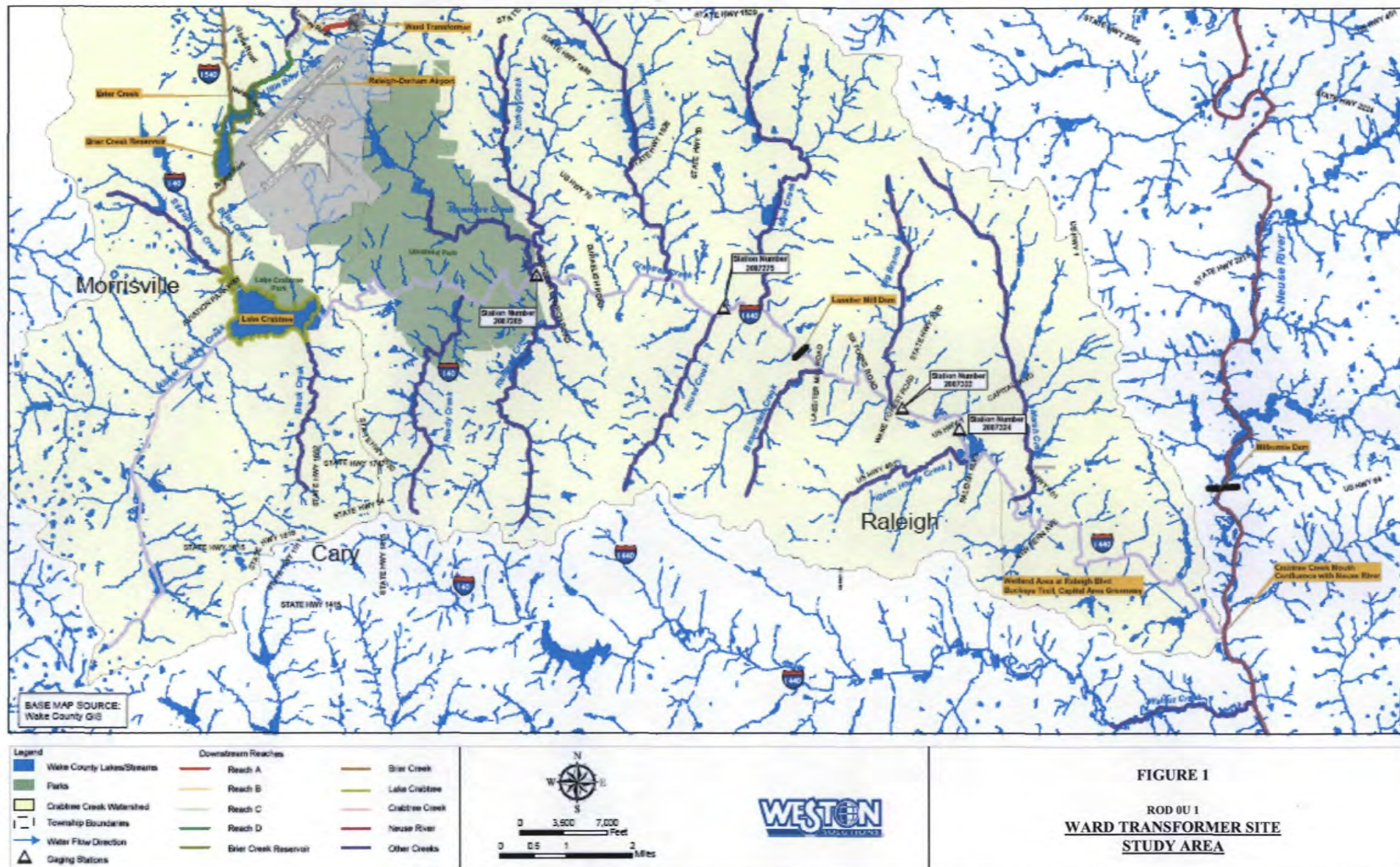
1. During the public comment period new information indicated the need for additional actions to address concerns regarding floodplain soil along Reaches B, C, D and Lower Brier Creek. These additional actions would address any contaminated flood plain soil with PCB concentrations above 1 mg/kg that may be present at these areas; and if present and not remove, exposure to this material would present unacceptable risk to humans and ecological receptors. In addition, contaminated soil from flood plain areas would be a source of PCB. After evaluating public comments EPA decided to modify Alternative 4 to include:

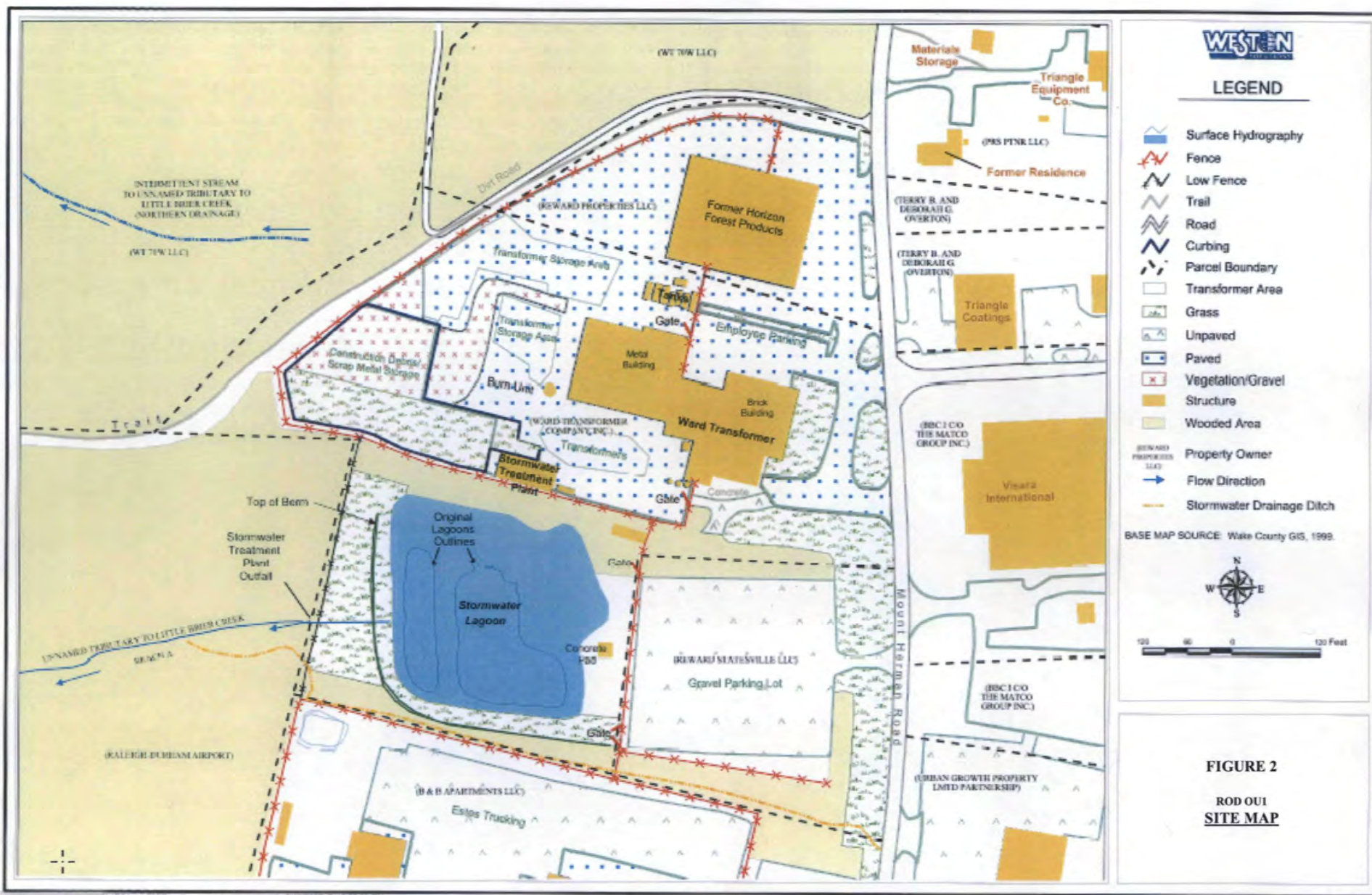
- Additional sampling of floodplain soil along Reaches B, C, D, and Lower Brier Creek as part of the pre-excavation sediment sampling program from Reaches B, C, D, and Lower Brier Creek, already included in Alternative 4.
- Excavation and disposal of floodplain soil along Reaches B, C, D, and Lower Brier Creek, to levels below the 1 mg/kg remediation goal, as part of the sediment excavation/disposal from Reaches B, C, D, and Lower Brier Creek, to levels below the 1 mg/kg remediation goal already included in Alternative 4.

2. The cost estimate for Alternative 4 was revised to include:

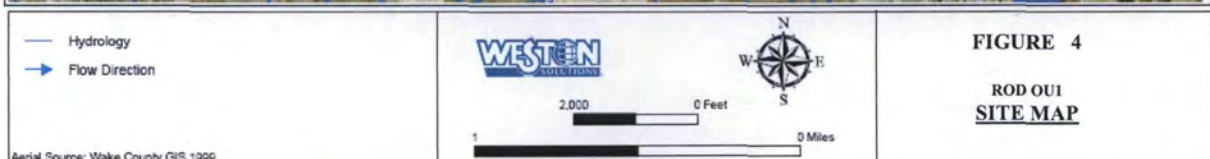
- Cost for floodplain pre-excavation sampling, excavation, and disposal.
- Cost for excavation-verification sampling, inadvertently not included in the original estimate.

APPENDIX A

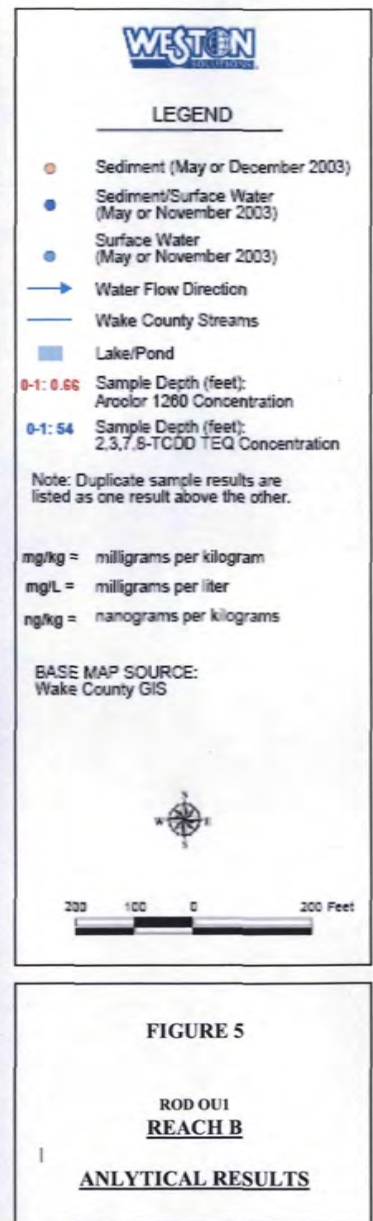








Aerial Source: Wake County GIS, 1996





WESTON
CONSULTING

LEGEND

- Sediment (May or November 2003)
 - Sediment/Surface Water (May or November 2003)
 - 0-1: 0.66 Sample Depth (feet): Aroclor 1260 Concentration
 - 0-1: 0.54 Sample Depth (feet): 2,3,7,8-TCDD TEQ Concentration
 - Water Flow Direction
 - Wake County Streams
- Note: Duplicate sample results are listed as one result above the other.
- mg/kg = milligrams per kilogram
 mg/L = milligrams per liter
 ng/kg = nanograms per kilograms
 U = PCBs were analyzed for, but not detected. The associated numerical value is the sample quantitation limit

BASE MAP SOURCE: Wake County GIS

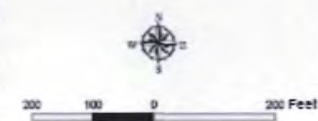
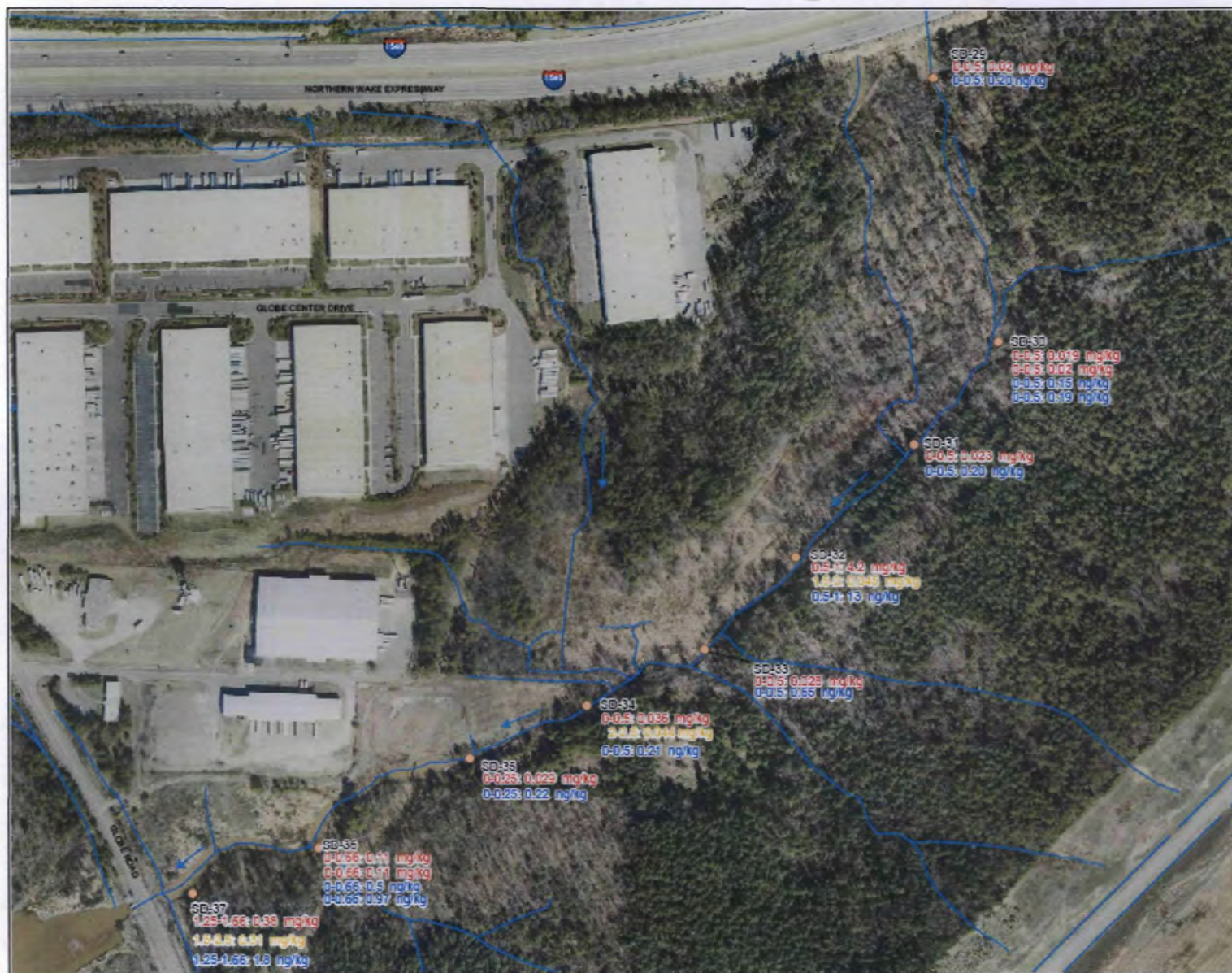


FIGURE 6

ROD OUI
REACH C

ANLYTICAL RESULTS



LEGEND

- Sediment
- Water Flow Direction
- Wake County Streams
- Sample Depth (feet):
0-1: 0.56
Aroclor 1260 Concentration
(November 2003)
- 0-1: 0.56
Sample Depth (feet):
Aroclor 1260 Concentration
(February/March 2006)
- 0-1: 54
Sample Depth (feet):
2,3,7,8-TCDD TEQ Concentration
(November 2003)

Note: Duplicate sample results are listed as one result above the other.

mg/kg = milligrams per kilogram

ng/kg = nanograms per kilogram

BASE MAP SOURCE:
Wake County GIS



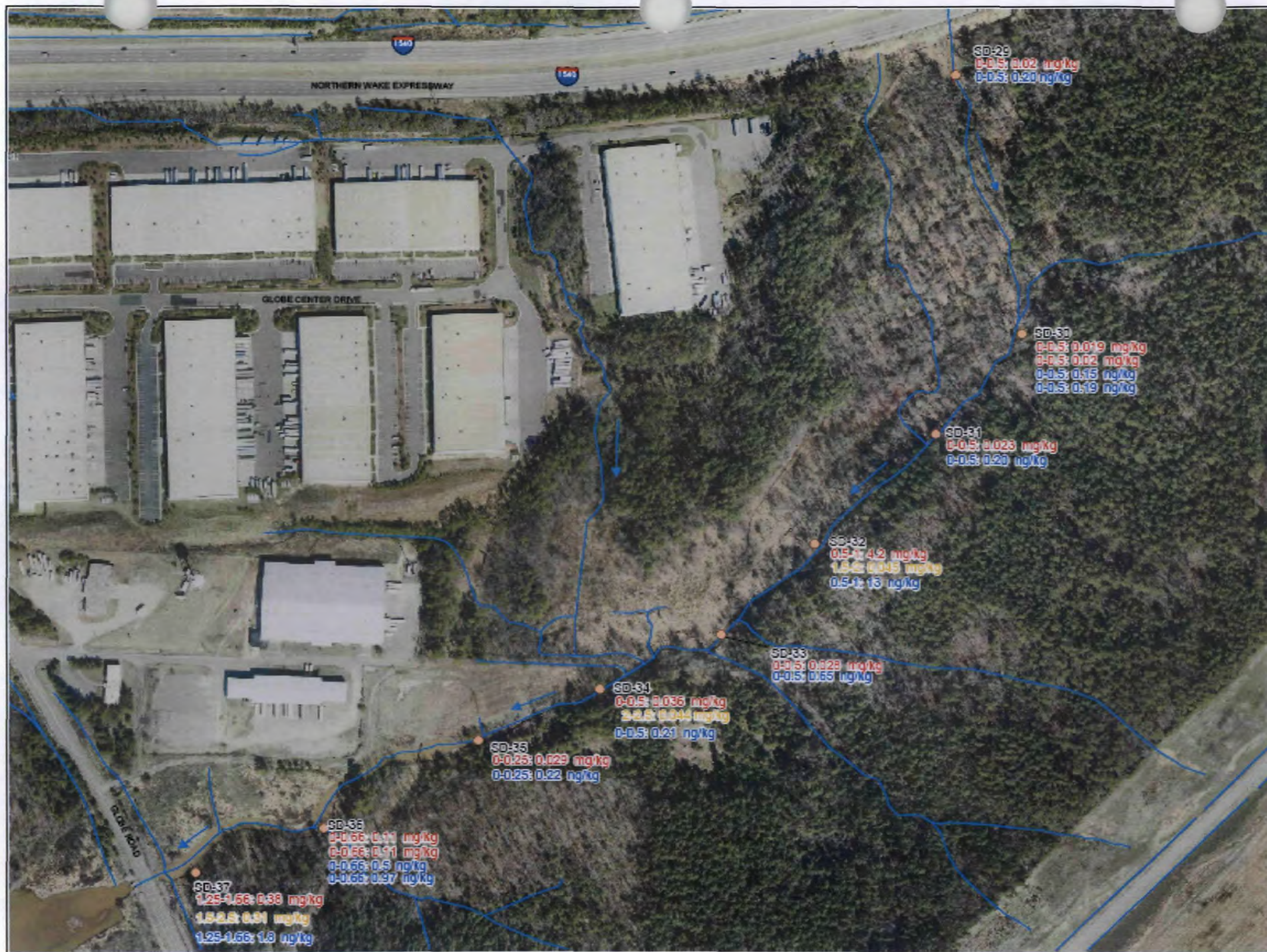
300 150 0 300 Feet

FIGURE 7

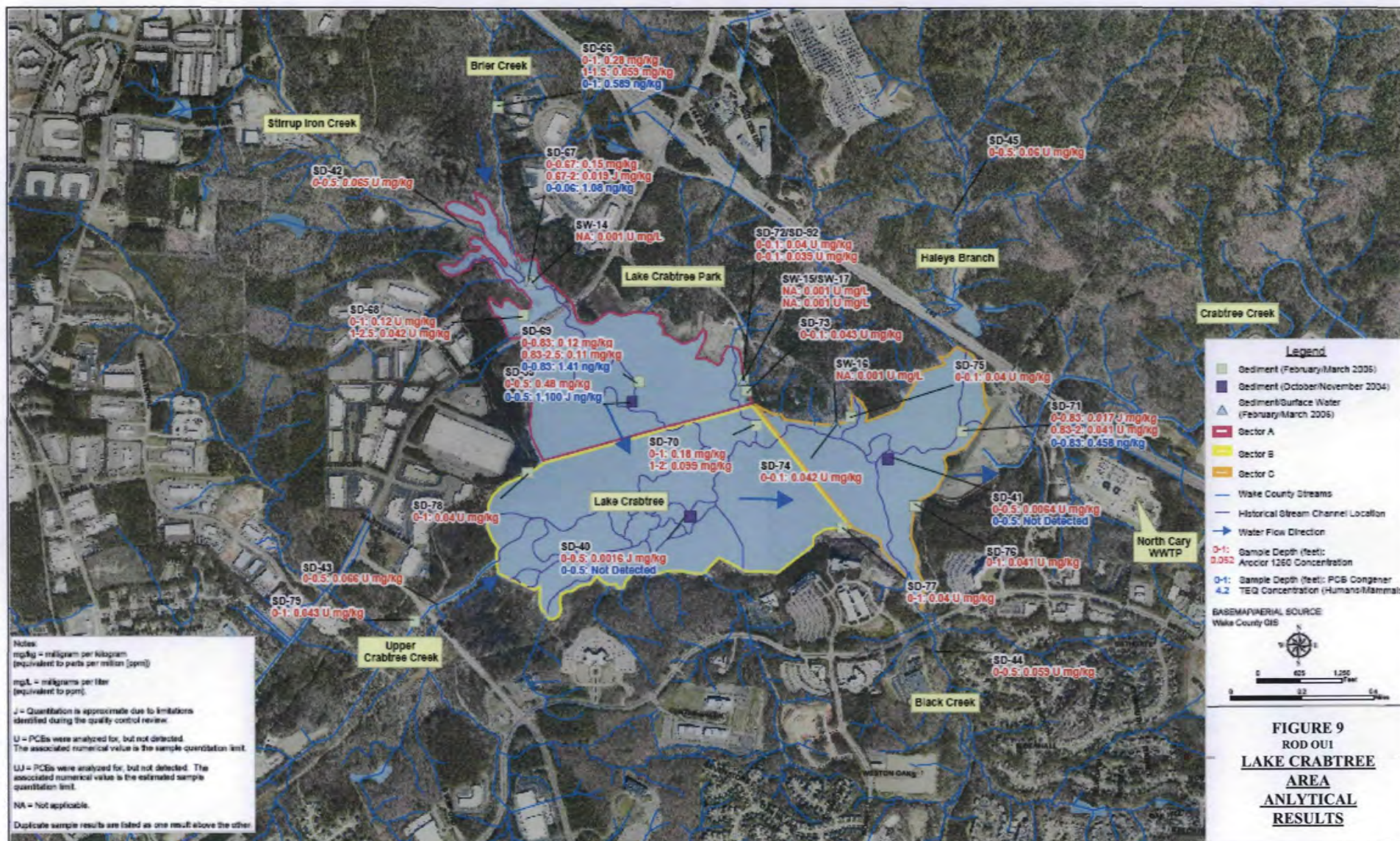
ROD OUI

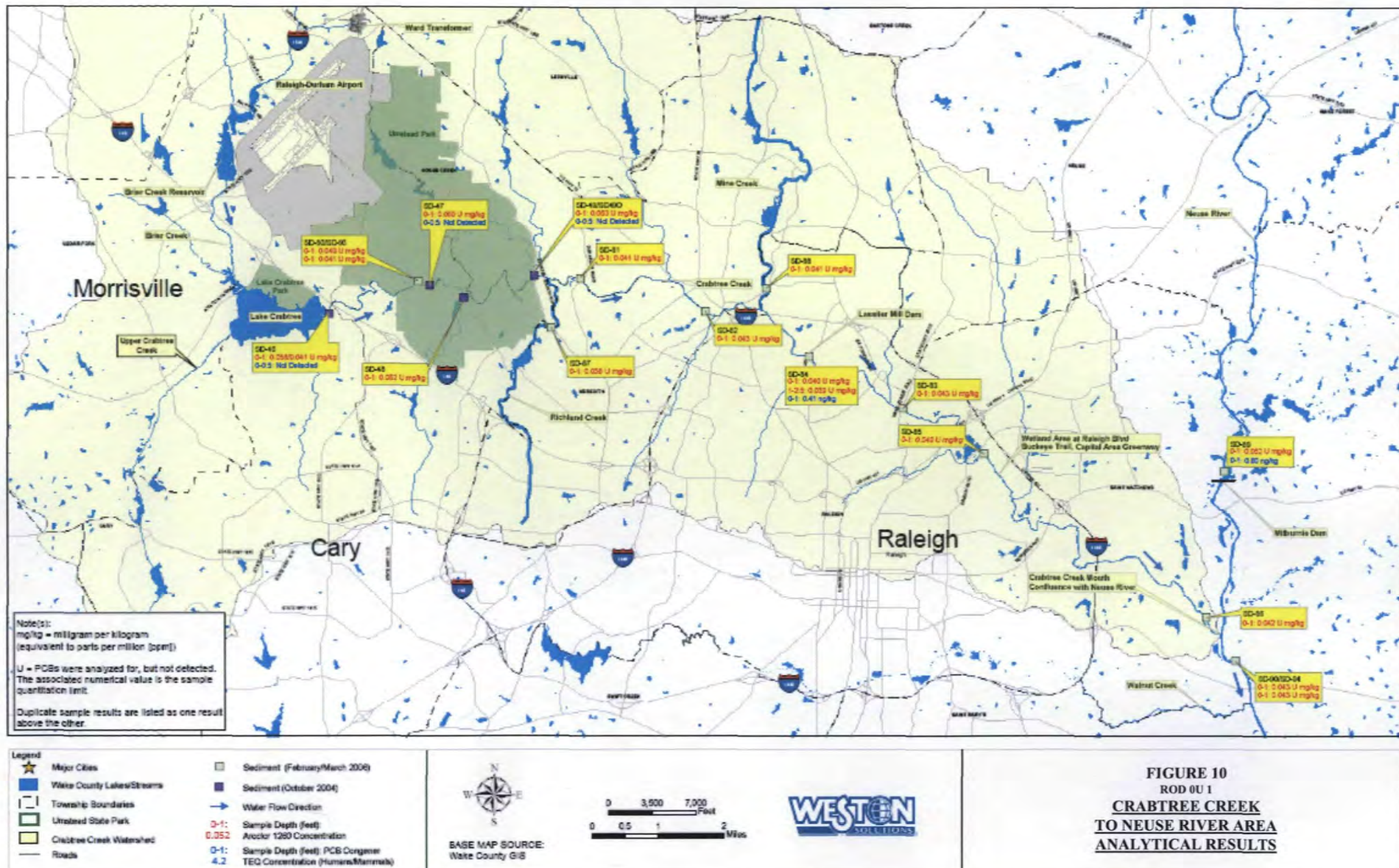
REACH D

ANLYTICAL RESULTS









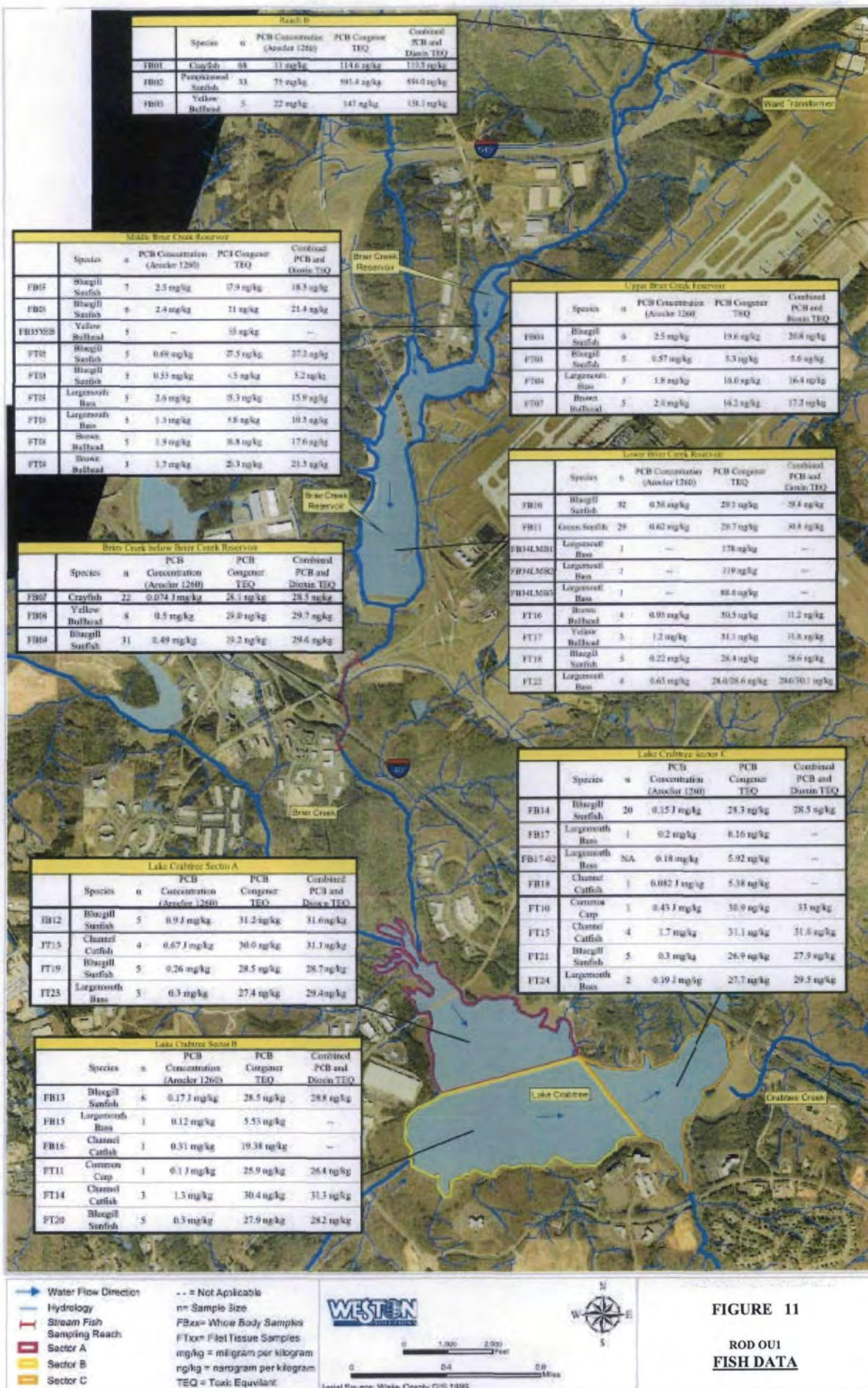


FIGURE 11

ROD OUI
FISH DATA

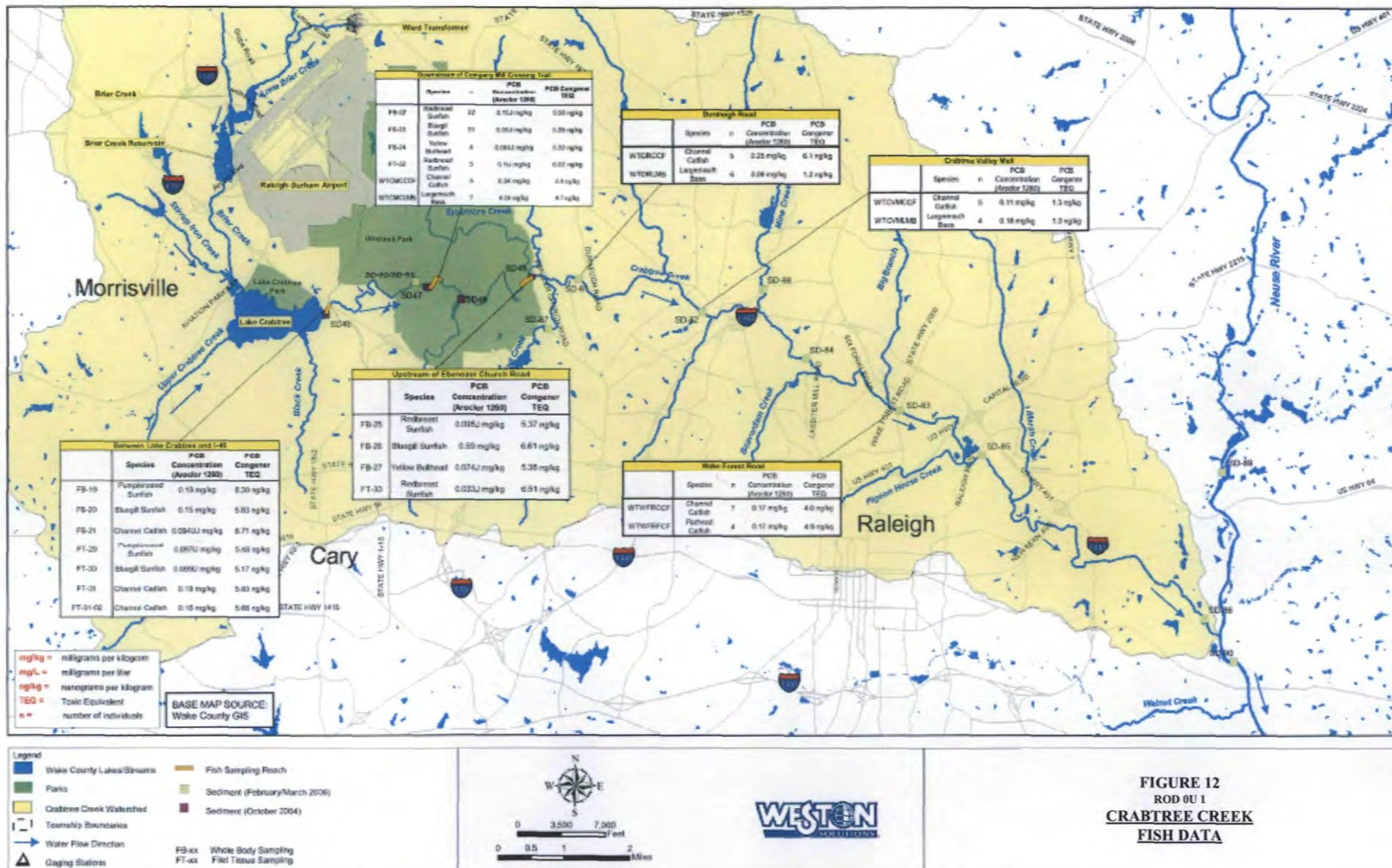


FIGURE 12
ROD 0U 1
CRABTREE CREEK
FISH DATA

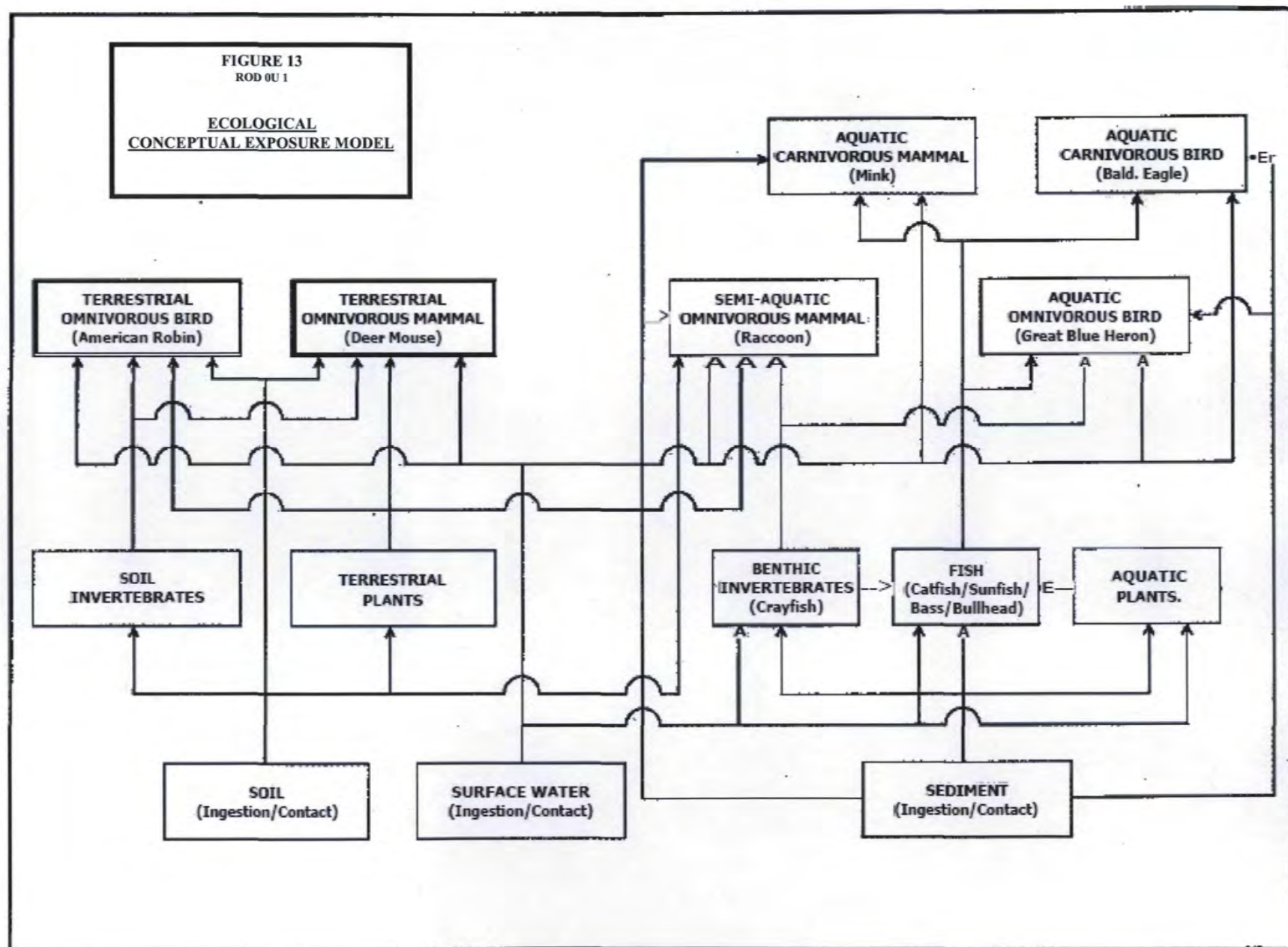


TABLE 8-1
EXPOSURE PATHWAYS

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Off /On Facility	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future Trespasser	Soils	Soils	Reach A	Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child trespasser incidentally ingests soil
						Dermal Contact	OFF	Quantitative	Adolescent child trespasser touches soil
	Sediments	Air	Reach A	Adolescent Child	7-16 yr	Inhalation	OFF	Quantitative	Adolescent child trespasser breathes airborne dust and VOCs
		Sediments	Reach A	Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child trespasser ingests sediment while wading
						Dermal Contact	OFF	Quantitative	Adolescent child trespasser touches sediment
		Surface Water	Reach A	Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child trespasser ingests surface water while wading
						Dermal Contact	OFF	Quantitative	Adolescent child trespasser touches surface water while wading
Future Resident/Wader	Sediments	Sediments	Combined Reaches B/C/D, Brier Creek Reservoir, and Brier Creek	Child	1- 6 yr	Ingestion	OFF	Quantitative	Child resident/wader ingests sediment while wading
						Dermal Contact	OFF	Quantitative	Child resident/wader touches sediment
				Adult	ED, 30 yr	Ingestion	OFF	Quantitative	Adult resident/wader ingests sediment while wading
						Dermal Contact	OFF	Quantitative	Adult resident/wader touches sediment
	Surface Water	Surface water	Combined Reaches B/C/D, Brier Creek Reservoir, and Brier Creek	Child	1- 6 yr	Ingestion	OFF	Quantitative	Child resident/wader ingests surface water while wading
						Dermal Contact	OFF	Quantitative	Child resident/wader touches surface water while wading
Current/Future Recreational Fisher	Fish	Fish	Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek to Neuse River	Child	1-6 yr	Ingestion	OFF	Quantitative	Younger child ingests fish
				Adolescent child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child ingests fish
				Adult	ED, 30 yr	Ingestion	OFF	Quantitative	Adult ingests fish
						Dermal Contact	OFF	Quantitative	Adult resident/wader touches surface water while wading
Current/Future Swimmer	Surface Water	Surface Water	Lake Crabtree	Child	1-6 yr	Ingestion	OFF	Quantitative	Child incidentally ingests surface water
						Dermal Contact	OFF	Quantitative	Child touches surface water
				Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child incidentally ingests surface water
						Dermal Contact	OFF	Quantitative	Adolescent child touches surface water
				Adult	ED, 30 yr	Ingestion	OFF	Quantitative	Adult incidentally ingests surface water
						Dermal Contact	OFF	Quantitative	Adult touches surface water
	Sediments	Sediments	Lake Crabtree	Child	1-6 yr	Ingestion	OFF	Quantitative	Child incidentally ingests sediment
						Dermal Contact	OFF	Quantitative	Child touches sediment
				Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child incidentally ingests sediment
						Dermal Contact	OFF	Quantitative	Adolescent child touches sediment
				Adult	ED, 30 yr	Ingestion	OFF	Quantitative	Adult incidentally ingests sediment
						Dermal Contact	OFF	Quantitative	Adult touches sediment

TABLE 8-2

RAGS Part D TABLE 5.1
NON-CANCER TOXICITY DATA - ORAL/DERMAL
Ward Transformer

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD		Oral Absorption Efficiency for Dermal (1)	Absorbed RfD for Dermal (1)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfD: Target Organ(s)	
		Value	Units		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
Acetophenone	Chronic	1.00E-01	mg/kg/day	1.0	1.00E-01	mg/kg/day	NA	3,000	IRIS	7/17/2006
Adon	Chronic	3.00E-05	mg/kg/day	1.0	3.00E-05	mg/kg/day	Liver	1,000	IRIS	7/17/2006
gamma-Chlordane	Chronic	5.00E-04	mg/kg/day	1.0	5.00E-04	mg/kg/day	Liver	300	IRIS	7/17/2006
4,4'-DDT	Chronic	5.00E-04	mg/kg/day	1.0	5.00E-04	mg/kg/day	Liver	100	IRIS	7/17/2006
Benz(a)pyrene	NA	NA	NA	1.0	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	Chronic	1.30E-05	mg/kg/day	1.0	1.30E-05	mg/kg/day	Liver	1,000	IRIS	7/17/2006
PCB Congener TEQ	NA	NA	NA	1.0	NA	NA	NA	NA	NA	NA
Endrin 1,2-GO	Chronic	2.00E-05	mg/kg/day	1.0	2.00E-05	mg/kg/day	Ocular/Uroreproductive/Integument*	300	IRIS	7/17/2006
1,2,3,7,8 TCDD TEQ	NA	NA	NA	1.0	NA	NA	NA	NA	NA	NA
Chlormercur	Chronic	1.00E+00	mg/kg/day	1.0	1.00E+00	mg/kg/day	CNS	NA	EPA, 2004b (EPA Region 9 PIRGs)	7/17/2006
Arsenic	Chronic	3.00E-04	mg/kg/day	1.0	3.00E-04	mg/kg/day	Integument *	3	IRIS	7/17/2006
Chromium	Chronic	3.00E-03	mg/kg/day	0.025	7.50E-05	mg/kg/day	NOEL	900	IRIS	7/17/2006
Iron	Chronic	3.00E-01	mg/kg/day	0.010	3.00E-03	mg/kg/day	Liver/Gastrointestinal/Body weight/Organ weight	NA	NCEA : Professional Judgement	7/17/2006
Manganese	Chronic	1.40E-01	mg/kg/day	0.040	1.40E-03	mg/kg/day	CNS	1	IRIS	7/17/2006
Total Mercury	Chronic	3.00E-04	mg/kg/day	1.0	3.00E-06	mg/kg/day	Immune System	NA	IRIS	7/17/2006
Strontium	Chronic	6.00E-01	mg/kg/day	0.010	6.00E-03	mg/kg/day	Bone	300	IRIS	7/17/2006
Vanadium	Chronic	1.00E-03	mg/kg/day	0.026	2.60E-05	mg/kg/day	Integument*	100	NCEA : HEAST	7/17/2006

(1) Source: EPA, 2004b; Exhibit 4.1.

Definitions:

* Integument includes skin, hair, nail, sebaceous and sweat glands.

CNS= enbrainnervous system

HEAST=Health Effects Assessment Summary Tables

IRIS=Integrated Risk Information System

NA=Not available

NCEA=National Center for Environmental Assessment

NOEL=No observed effect level

PFM = Provisional Peer Review Toxicity Values for Superfund

TABLE 8-3

RAGS Part D TABLE 5.2
NON-CANCER TOXICITY DATA – INHALATION
Ward Transformer

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC		Extrapolated RfD (1)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC Target Organ(s)	
		Value	Units	Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	Chronic	1.05E-04	mg/m3	3.00E-05	mg/kg/day	NA	NA	IRIS	7/17/2006
gamma-Chlordane	Chronic	7.00E-04	mg/m3	2.00E-04	mg/kg/day	Liver	1,000	IRIS	7/17/2006
4,4'-DDT	Chronic	1.75E-03	mg/m3	5.00E-04	mg/kg/day	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	Chronic	4.55E-05	mg/m3	1.16E-05	mg/kg/day	NA	NA	IRIS	7/17/2006
PCB Congener TEQ	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	Chronic	7.00E-05	mg/m3	2.00E-05	mg/kg/day	NA	NA	NA	NA
Aroclor 1254 TEQ	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	Chronic	4.90E-03	mg/m3	1.40E-03	mg/kg/day	NA	NA	PPRTV	7/17/2006
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	Chronic	7.70E-06	mg/m3	2.20E-06	mg/kg/day	Lung	90	IRIS	7/17/2006
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	Chronic	4.90E-05	mg/m3	1.40E-05	mg/kg/day	CNS	1,000	IRIS	7/17/2006
Total Mercury	Chronic	3.01E-04	mg/m3	8.60E-05	mg/kg/day	CNS	30	IRIS	7/17/2006
Strontium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA

(1) See Risk Assessment text for the derivation of the "Extrapolated RfD".

Definitions:

• Integument includes skin, hair, nail, sebaceous and sweat glands.

CNS=Central nervous system

IRIS=Integrated Risk Information System

NA=Not available

PPRTV = Provisional Peer Review Toxicity Values for Superfund

TABLE 8-4

RAGS Part D TABLE 6.1
 CANCER TOXICITY DATA - ORAU DERMAL
 Ward Transformer

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal (1)	Absorbed Cancer Slope Factor for Dermal (3)		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
etophenone	NA	NA	1.0	NA	NA	NA	NA	NA
a	1.70E+01	1/mg/kg/day	1.0	1.70E+01	1/mg/kg/day	B2	IRIS	7/17/2006
alpha-Chlordane	3.50E-01	1/mg/kg/day	1.0	3.50E-01	1/mg/kg/day	B2	IRIS	7/17/2006
,4-DDT	3.40E-01	1/mg/kg/day	1.0	3.40E-01	1/mg/kg/day	B2	IRIS	7/17/2006
Benzo(a)pyrene	7.30E+00	1/mg/kg/day	1.0	7.30E+00	1/mg/kg/day	B2	IRIS	7/17/2006
Heptachlor Epoxide	9.10E+00	1/mg/kg/day	1.0	9.10E+00	1/mg/kg/day	B2	IRIS	7/17/2006
PCB Congener TEO	1.50E+05	1/mg/kg/day	1.0	1.50E+05	1/mg/kg/day	B2	HEAST	7/17/2006
rochlor 1260	2.00E+00	1/mg/kg/day	1.0	2.00E+00	1/mg/kg/day	B2	IRIS	7/17/2006
,3,7,8 TCDD TEO	1.50E+05	1/mg/kg/day	1.0	1.50E+05	1/mg/kg/day	B2	HEAST	7/17/2006
uranium	NA	NA	1.0	NA	NA	NA	NA	NA
manic	1.50E+00	1/mg/kg/day	1.0	1.50E+00	1/mg/kg/day	A	IRIS	7/17/2006
thiocyanate	NA	NA	0.025	NA	NA	NA	NA	NA
ran	NA	NA	0.010	NA	NA	NA	NA	NA
ganese	NA	NA	0.040	NA	NA	NA	NA	NA
ethyl Mercury	NA	NA	1.0	NA	NA	NA	NA	NA
trantium	NA	NA	0.010	NA	NA	NA	NA	NA
arsenic	NA	NA	0.025	NA	NA	NA	NA	NA

(1) Source: EPA, 2004b; Exhibit 4-1.

Definitions: A - Human carcinogen.

B1 - Probable human carcinogen - indicates that limited human data are available.

B2 - Probable human carcinogen - indicates sufficient evidence in animals and
 inadequate or no evidence in humans.

HEAST=Health Effects Assessment Summary Tables.

IRIS = Integrated Risk Information System.

NA = Not available.

TABLE 8-5

RAGS Part D TABLE 8.2
CANCER TOXICITY DATA - INHALATION
 Ward Transformer

Chemical of Potential Concern	Unit Risk		Inhalation Cancer Slope Factor		Weight of Evidence/ Cancer Guideline	Unit Risk: Inhalation CSP	
	Value	Units	Value	Units	Description	Source(s)	Date(s) (MM/DD/YYYY)
• etophenone	NA	NA	NA	NA	NA	NA	NA
dioxin	4.80E-03	1/pg/m3	1.70E+01	1/mg/kg/day	B2	IRIS	7/17/2006
alpha-Chlordane	1.00E-04	1/pg/m3	3.50E-01	1/mg/kg/day	B2	IRIS	7/17/2006
,4-DOT	9.71E-05	1/pg/m3	3.40E-01	1/mg/kg/day	B2	IRIS	7/17/2006
Benzo(a)pyrene	1.10E-03	1/pg/m3	3.85E+00	1/mg/kg/day	B2	Cal EPA	7/17/2006
oxychlor Epoxide	2.60E-03	1/pg/m3	9.10E+00	1/mg/kg/day	B2	IRIS	7/17/2006
PCB Congener TEQ	4.29E+01	1/pg/m3	1.50E+05	1/mg/kg/day	B2	IRIS	7/17/2006
for 1260	5.71E-04	1/pg/m3	2.00E+00	1/mg/kg/day	B2	IRIS	7/17/2006
,3,7,8 TCDD TEQ	4.29E+01	1/pg/m3	1.50E+05	1/mg/kg/day	B2	IRIS	7/17/2006
antimony	NA	NA	NA	NA	NA	NA	NA
arsenic	4.31E-03	1/pg/m3	1.51E+01	1/mg/kg/day	A	IRIS	7/17/2006
chromium	1.17E-02	1/pg/m3	4.10E+01	1/mg/kg/day	A	IRIS	7/17/2006
cadmium	NA	NA	NA	NA	NA	NA	NA
barium	NA	NA	NA	NA	NA	NA	NA
total Mercury	NA	NA	NA	NA	NA	NA	NA
chromium	NA	NA	NA	NA	NA	NA	NA
antimony	NA	NA	NA	NA	NA	NA	NA

Definitions:

- A - Human carcinogen.
- B1 - Probable human carcinogen - Indicates that limited human data are available.
- B2 - Probable human carcinogen - Indicates sufficient evidence in animals and inadequate or no evidence in humans.
- Cal EPA = California EPA
- IRI = Integrated Risk Information System
- NA=Not available

TABLE 8-6
Ward Transformer Risk Summary

Exposure Scenario by Exposure Subunit	Medium	Site Health Effects			
		ILCR	Percent of Total Site Risk	HI	Percent of Total Site Risk
		Reach A			
Current/Future Trespasser (See Tables 5-32 & 5-62-Aroclors)"					
Ingestion	SS	4.62E-06	16 (18)	0.78	9.5 (17)
Dermal Contact	SS	2.10E-05	71 (82)	3.84	47 (83)
Inhalation	SS	6.30E-11	2.1E-04 (2.5E-04)	2.20E-06	2.7E-05 (4.7E-05)
<i>Soil Subtotal</i>		<i>2.77E-05</i>		<i>4.63</i>	
Ingestion	SD	7.65E-07	2.6 (21)	0.11	1.3 (15)
Dermal Contact	SD	2.96E-06	10 (79)	0.61	7.4 (85)
<i>Sediment Subtotal</i>		<i>3.73E-06</i>		<i>0.72</i>	
Ingestion	SW	1.96E-07	0.66 (92)	0.29	3.5 (10)
Dermal Contact	SW	1.79E-08	6.0E-02 (8.3)	2.62	32 (90)
<i>Surface Water Subtotal</i>		<i>2.14E-07</i>		<i>2.91</i>	
<i>Site Total</i>	SS+SD+SW	2.96E-05		8.26	
Current/Future Trespasser (See Tables 5-33 & 5-63-PCB Congeners)"					
Ingestion	SS	8.31E-06	0.87 (18)	0.010	0.30 (4.7)
Dermal Contact	SS	3.84E-05	4.0 (82)	0.20	6.0 (95)
Inhalation	SS	1.09E-10	1.15E-05 (2.3E-04)	8.15E-07	2.5E-05 (4.0E-04)
<i>Soil Subtotal</i>		<i>4.67E-05</i>		<i>0.20</i>	
Ingestion	SD	1.59E-04	17 (18)	0.0031	0.10 (2.4)
Dermal Contact	SD	7.47E-04	78 (82)	0.13	3.9 (98)
<i>Sediment Subtotal</i>		<i>9.06E-04</i>		<i>0.13</i>	
Ingestion	SW	1.96E-07	0.021 (92)	0.29	9.0 (10)
Dermal Contact	SW	1.79E-08	0.002 (8.3)	2.62	81 (90)
<i>Surface Water Subtotal</i>		<i>2.14E-07</i>		<i>2.91</i>	
<i>Site Total</i>	SS+SD+SW	9.53E-04		3.25	
<i>Combined Reaches B/C/D, Brier Creek Reservoir, and Brier Creek</i>					
Future Child Resident/Wader (See Tables 5-34 & 5-64-Aroclors)"					
Ingestion	SD	7.09E-07	57 (94)	0.14	29 (76)
Dermal Contact	SD	4.43E-08	3.6 (5.9)	0.045	9.1 (24)
<i>Sediment Subtotal</i>		<i>7.53E-07</i>		<i>0.19</i>	
Ingestion	SW	3.29E-07	27 (67)	0.090	18 (30)
Dermal Contact	SW	1.59E-07	13 (33)	0.21	43 (70)
<i>Surface Water Subtotal</i>		<i>4.88E-07</i>		<i>0.30</i>	
<i>Site Total</i>	SD+SW	1.24E-06		0.49	
Future Child Resident/Wader (See Tables 5-35 & 5-65-PCB Congeners)"					
Ingestion	SD	2.20E-05	89 (91)	0.073	18 (66)
Dermal Contact	SD	2.28E-06	9.2 (9)	0.037	9.0 (34)
<i>Sediment Subtotal</i>		<i>2.43E-05</i>		<i>0.11</i>	
Ingestion	SW	3.29E-07	1.3 (67)	0.090	22 (30)
Dermal Contact	SW	1.59E-07	0.64 (33)	0.21	52 (70)
<i>Surface Water Subtotal</i>		<i>4.88E-07</i>		<i>0.30</i>	
<i>Site Total</i>	SD+SW	2.48E-05		0.41	
Future Adult Resident/Wader (See Tables 5-36 & 5-66-Aroclors)"					
Ingestion	SD	3.80E-07	14 (21)	0.015	3.2 (5.0)
Dermal Contact	SD	1.46E-06	53 (79)	0.29	62 (95)
<i>Sediment Subtotal</i>		<i>1.84E-06</i>		<i>0.31</i>	
Ingestion	SW	3.52E-07	13 (39)	0.019	4.0 (11)
Dermal Contact	SW	5.55E-07	20 (61)	0.15	31 (89)
<i>Surface Water Subtotal</i>		<i>9.03E-07</i>		<i>0.17</i>	
<i>Site Total</i>	SD+SW	2.75E-06		0.48	

TABLE 8-6 (continued)

Exposure Scenario by Exposure Subunit	Site Health Effects				
	Medium	ILCR	Percent of Total Site Risk'	HI	Percent of Total Site Risk'
'Combined Reaches B/C/D, Bier Creek Reservoir, and Brier Creek (continued).					
Future Adult Resident/Wader (See Tables 5-37 & 5-67-PCB Congeners)"					
Ingestion	SD	1.18E-05	13 (14)	0.0078	1.9 (3.1)
Dermal Contact	SD	7.49E-05	86 (86)	0.24	58 (97)
Sediment Subtotal		8.67E-05		0.25	
Ingestion	SW	3.52E-07	0.40 (39)	0.019	4.6 (11)
Dermal Contact	SW	5.55E-07	0.63 (61)	0.15	35 (89)
Surface Water Subtotal		9.08E-07		0.17	
Site Total	SD+SW	8.76E-05		0.42	
Brier Creek Reservoir					
Current/Future Younger Child Recreational Fisherman (See Tables 5-38 & 5-68-Aroclors)"					
Fish Ingestion	FT	1.05E-04	100	30.7	100
Total	FT	1.05E-04		30.7	
Current/Future Younger Child Recreational Fisherman (See Tables 5-39 & 5-69-PCB Congeners)"					
Fish Ingestion	FT	1.14E-04	100	1.18	100
Total	FT	1.14E-04		1.18	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-40 & 5-70-Aroclors)"					
Fish Ingestion	FT	8.46E-05	100	14.8	100
Total	FT	8.46E-05		14.8	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-41 & 5-71-PCB Congeners)"					
Fish Ingestion	FT	9.18E-05	100	0.57	100
Total	FT	9.18E-05		0.57	
Current/Future Adult Recreational Fisherman (See Tables 5-42 & 5-72-Aroclors)"					
Fish Ingestion	FT	5.01E-04	100	29.2	100
Total	FT	5.01E-04		29.2	
Current/Future Adult Recreational Fisherman (See Tables 5-43 & 5-73-PCB Congeners)"					
Fish Ingestion	FT	5.44E-04	100	1.12	100
Total	FT	5.44E-04		1.12	
Lake Crabtree ga					
Current/Future Younger Child Recreational Fisherman (See Tables 5-44 & 5-74-Aroclors)"					
Fish Ingestion	FT	6.78E-05	100	17.8	100
Total	FT	6.78E-05		17.8	
Current/Future Younger Child Recreational Fisherman (See Tables 5-45 & 5-75-PCB Congeners)"					
Fish Ingestion	FT	1.44E-04	100	---	NC
Total	FT	1.44E-04		---	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-46 & 5-76-Aroclors)"					
Fish Ingestion	FT	5.44E-05	100	8.57	100
Total	FT	5.44E-05		8.57	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-47 & 5-75-PCB Congeners)"					
Fish Ingestion	FT	1.16E-04	100	---	NC
Total	FT	1.16E-04		---	
Current/Future Adult Recreational Fisherman (See Tables 5-48 & 5-78-Aroclors)"					
Fish Ingestion	FT	3.22E-04	100	16.9	100
Total	FT	3.22E-04		16.9	
Current/Future Adult Recreational Fisherman (See Tables 5-49 & 5-79-PCB Congeners)"					
Fish Ingestion	FT	6.87E-04	100	---	NC
Total	FT	6.87E-04		---	

TABLE 8-6 (continued)

Ward Transformer Risk Summary

Exposure Scenario by Exposure Subunit	Medium	Site Health Effects			
		ILCR	Percent of Total Site Risk	HI	Percent of Total Site Risk
	Lake Crabtree(continued)				
Current/Future Younger Child Swimmer (See Tables 5-56 & 5-86-Aroclors)					
Ingestion	SD	3.16E-08	91	0.067	69
Dermal Contact	SD	3.31E-09	9.5	0.030	31
Site Total	SD	3.49E-08		0.10	
Current/Future Younger Child Swimmer (See Tables 5-57 & 5-87-PCB Congeners)"					
Ingestion	SD	8.27E-06	91	0.058	67
Dermal Contact	SD	8.66E-07	9.5	0.029	33
Site Total	SD	9.13E-06		0.087	
Current/Future Adolescent Child Swimmer (See Tables 5-58 & 5-88-Aroclors)"					
Ingestion	SD	9.39E-09	18	0.012	4.8
Dermal Contact	SD	4.42E-08	82	0.24	95
Site Total	SD	5.36E-08		0.25	
Current/Future Adolescent Child Swimmer (See Tables 5-59 & 5-89-PCB Congeners)"					
Ingestion	SD	2.46E-06	18	0.010	4.3
Dermal Contact	SD	1.16E-05	82	0.23	96
Site Total	SD	1.40E-05		0.24	
Current/Future Adult Swimmer (See Tables 5-60 & 5-90-Aroclors)"					
Ingestion	SD	1.41E-08	11	0.0072	3.5
Dermal Contact	SD	1.09E-07	89	0.20	96
Site Total	SD	1.23E-07		0.20	
Current/Future Adult Swimmer (See Tables 5-61 & 5-91-PCB Congeners)"					
Ingestion	SD	3.69E-06	11	0.0062	3.2
Dermal Contact	SD	2.86E-05	89	0.19	97
Site Total	SD	3.23E-05		0.20	
Crabtree Creek					
Current/Future Younger Child Recreational Fisherman (See Tables 5-50 & 5-80-Aroclors)"					
Fish Ingestion	FT	1.13E-05	100	3.29	100
Total	FT	1.13E-05		3.29	
Current/Future Younger Child Recreational Fisherman (See Tables 5-51 & 5-81-PCB Congeners)"					
Fish Ingestion	FT	3.16E-05	100	---	NC
Total	FT	3.16E-05		---	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-52 & 5-82-Aroclors)"					
Fish Ingestion	FT	9.07E-06	100	1.59	100
Total	FT	9.07E-06		1.59	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-53 & 5-83-PCB Congeners)"					
Fish Ingestion	FT	2.54E-05	100	---	NC
Total	FT	2.54E-05		---	
Current/Future Adult Recreational Fisherman (See Tables 5-54 & 5-84-Aroclors)"					
Fish Ingestion	FT	5.37E-05	100	3.13	100
Total	FT	5.37E-05		3.13	
Current/Future Adult Recreational Fisherman (See Tables 5-55 & 5-85-PCB Congeners)"					
Fish Ingestion	FT	1.50E-04	100	---	NC
Total	FT	1.50E-04		---	

Note: Shaded areas equal site ILCR greater than 1E-04 or HI greater than 1.0

* Numbers in parentheses represent percent of medium risk

These tables represent the Range Part D format 7 and 9, respectively.

FT = Fish Fat

HI = Hazard Index

ILCR = Lifetime incremental cancer risk

SD = Sediment

NC = Not calculated. In this medium and reach, there were no carcinogenic COPCs.

SS = Surface soils (0 to 1 ft).

SW = Surface Water.

TABLE 8-7**Exposure Point Concentration for Tissue
Little Brier Creek and Tributaries**

PCBs/Dioxins	Units	Individual Whole Body Tissue Samples		
		Crayfish	Sunfish	Bullhead
PCB-1260 (Aroclor 1260)	mg/kg	11	75	22
PCB Congener TEQ (Birds)	ng/kg	98.0	428	99.8
PCB Congener TEQ (Fish)	ng/kg	5.05	23.3	5.74
PCB Congener TEQ (Humans/Mammals)	ng/kg	115	591	147
Dioxins/furans TEQ (Birds)	ng/kg	15.7	21.9	15.5
Dioxins/furans TEQ (Fish)	ng/kg	4.55	6.04	7.07
Dioxins/furans TEQ (Humans/Mammals)	ng/kg	4.92	6.57	7.15
D/F & PCB TEQ (Birds)	ng/kg	114	450	115
D/F & PCB TEQ (Fish)	ng/kg	9.61	29.4	12.8
D/F & PCB TEQ (Humans/Mammals)	ng/kg	120	598	154

Tissue data for all species collected within the reach are presented. The same species were not found in each reach.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

TABLE 8-8

Exposure Point Concentration for Tissue: Brier Creek Reservoir

PCB/Dioxins	Units	Individual Whole Body Tissue Samples								
		Sunfish I	Sunfish	Sunfish	Sunfish	Sunfish	Bass I	Bass	Bass	Bullhead
PCB-1260 (Aroclor 1260)	mg/kg	2.5	2.5	2.4	0.38	0.62	--	--	--	2.4(filet)
PCB Congener TEQ (Birds)	ng/kg	16.6	16.6	17.8	63.1	63.2	158	89.3	75.7	64.8
PCB Congener TEQ (Fish)	ng/kg	0.808	0.766	0.878	1.45	1.47	8.02	4.84	3.74	2.75
PCB Congener TEQ (Humans/Mammals)	ng/kg	19.6	17.8	21.0	29.1	29.7	178	119	88.6	65.0
Dioxins/furans TEQ (Birds)	ng/kg	1.73	1.49	1.10	0.981	1.87	--	--	--	--
Dioxins/furans TEQ (Fish)	ng/kg	0.559	0.411	0.38	0.313	0.664	--	--	--	--
Dioxins/furans TEQ (Humans/Mammals)	ng/kg	0.588	0.451	0.389	0.33	0.703	--	--	--	--
D/F & PCB TEQ (Birds)	ng/kg	18.3	18.1	18.9	64.1	65.1	--	--	--	--
D/F & PCB TEQ (Fish)	ng/kg	1.37	1.18	1.26	1.77	2.14	--	--	--	--
D/F & PCB TEQ (Humans/Mammals)	ng/kg	20.2	18.3	21.4	29.4	30.4	--	--	--	--

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical in each trophic level [bottom feeder (catfish) and predator (sunfish and bass)]. Maximum detected Aroclor 1260 concentration in file presented for bullhead because whole body sample was not analyzed for Aroclors. Thus, the file tissue data for Aroclors is also provided in Appendix 1, Table 1.1-2.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

-- = Not analyzed.

TABLE 8-9

**Exposure Point Concentration for Tissue
Brier Creek (Below Brier Creek Reservoir)**

IPCBs/Dioxins	Units	Individual Whole Body Tissue Samples		
		Crayfish	Sunfish	Bullhead
PCB-1260 (Aroclor 1260)	mg/kg	0.074	0.49	0.5
PCB Congener TEQ (Birds)	ng/kg	62.9	63.1	63.1
PCB Congener TEQ (Fish)	ng/kg	1.42	1.46	1.46
PCB Congener TEQ (Humans/Mammals)	ng/kg	28.1	29.2	29.0
Dioxins/furans TEQ (Birds)	ng/kg	0.975	1.26	1.63
Dioxins/furans TEQ (Fish)	ng/kg	0.319	0.388	0.669
Dioxins/furans TEQ (Humans/Mammals)	ng/kg	0.338	0.405	0.7
D/F & PCB TEQ (Birds)	ng/kg	63.8	64.4	64.7
D/F & PCB TEQ (Fish)	ng/kg	1.74	1.84	2.13
D/F & PCB TEQ (Humans/Mammals)	ng/kg	28.4	29.6	29.7

Tissue data for all species collected within the reach are presented.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

TABLE 8-10

Exposure Point Concentration for Tissue
Lake Crabtree

PCBs/Dioxins	Units	Individual Whole Body Tissue Samples						
		Sunfish IL	Sunfish	Sunfish	Bass	Bass	Catfish	Catfish
PCB-1260 (Aroclor 1260)	ng/kg	0.9	0.17	0.15	0.12	0.19	0.31	0.062
PCB-1260 (Aroclor 1260) - Fillet *								0.713
PCB Congener TEQ (Birds)	ng/kg	63.6	63.0	62.9	4.87	5.25	14.0	4.82
PCB Congener TEQ (Fish)	ng/kg	1.51	1.44	1.43	0.26	0.28	0.79	0.25
PCB Congener TEQ (Humans/Mammals)	ng/kg	31.2	28.5	28.3	5.53	7.04	19.4	5.38
Dioxins/furans TEQ (Birds)	ng/kg	0.657	0.454	0.721	-	-	-	-
Dioxins/furans TEQ (Fish)	ng/kg	0.317	0.281	0.252	-	-	-	-
Dioxins/furans TEQ (Humans/Mammals)	ng/kg	0.341	0.293	0.269	-	-	-	-
D/F & PCB TEQ (Birds)	ng/kg	64.2	63.4	63.6	4.87	5.25	14.0	4.82
D/F & PCB TEQ (Fish)	ng/kg	1.83	1.72	1.68	0.26	0.28	0.79	0.25
D/F & PCB TEQ (Humans/Mammals)	ng/kg	31.6	28.8	28.5	5.53	7.04	19.4	5.38

* Average 2003 fillet sample result is presented because concentrations (0.67, 1.3, 1.7 mg/kg) were higher in fillet than whole body samples.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical in each trophic level [bottomfeeder (catfish) and predator (sunfish and bass)]

Tissue data for all species collected within the reach are presented.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

- = Not analyzed

TABLE 8-11

**Exposure Point Concentration for Tissue
Crabtree Creek**

PCBs/Dioxins	Units	Individual Whole Body Tissue Samples										Catfish (filet)*
		Crayfish	Crayfish	Crayfish	Sunfish	Sunfish	Sunfish	Bass (filet)*	Catfish	Catfish	Catfish	
CB-1260 (Aroclor 1260)	mg/kg	0.18	0.15	0.095	0.15	0.09	0.59	--	--	0.064	0.074	0.34
B Congener TEQ (Birds)	mg/kg	5.2E-06	4.9E-06	4.7E-06	5.1E-06	4.7E-06	5.1E-06	6.35E-06	5.9E-06	4.7E-06	4.8E-06	7.12E-06
CB Congener TEQ (Fish)	mg/kg	2.8E-07	2.6E-07	2.5E-07	2.7E-06	2.5E-07	3.3E-07	--	3.3E-07	2.5E-07	2.5E-07	--
CB Congener TEQ (Humans/Mammals)	mg/kg	6.3E-06	5.5E-06	5.4E-06	5.8E-06	5.3E-06	6.6E-06	--	6.7E-06	5.3E-06	5.4E-06	6.83E-06

* Fillet sample results presented because concentrations were higher in fillet than whole body samples. Thus, fillet tissue data for PCB congeners is also provided in Appendix 1, Table 1-1.5.

Tissue data for all species collected within the reach are presented.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical in each trophic level (bottom feeder (catfish) and predator (sunfish and bass))

TABLE 8-12

PCBs and PCB Congeners Measured in Surface Water

Field Sample ID	Parameter Name	Concentration
Little Brier Creek and Tributaries*		
SW03-01	PCB-1260 (Aroclor 1260)	1.5
SW04-01	PCB-1260 (Aroclor 1260)	0.86 J
SW05-01	PCB-1260 (Aroclor 1260)	0.46 J
SW10	PCB-1260 (Aroclor 1260)	0.31 J
SW11	PCB-1260 (Aroclor 1260)	0.17 J
SW12/SW13 (Duplicates)	PCB-1260 (Aroclor 1260)	0.47 J/0.35 J
Lake Crabtree		
SW14	PCB Congeners	ND
SW15	PCB Congeners	ND
SW16	PCB Congeners	ND

All surface water samples collected 5/11/2003, 12/13/2005, and 2/28/2006.

All concentrations in µg/L.

* PCBs were nondetect in other surface water samples (SW01, SW02, SW06 - SW09).

ND = Not detected above detection limit. Detection limits ranged from 0.0019 to 0.0039 µg/L.

J = Estimated value.

TABLE 8-13

Exposure Point Concentrations for Sediment: Little Brier Creek and Tributaries

Location	Reach	Depth (feet)		Parameter									Aroclor 1260 ug/kg
				Dioxins/furans TEQ			PCB Congener TEQ			D/F & PCB TEQ			
				Birds: ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds: ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds: ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	
SD01	B	0	0.5	1.9	1.49	1.67	1480	61.2	1200	1480	62.7	1200	72 U
SD02	B	0	0.5	1.7	1.47	1.22	150	3.37	60.5	152	4.83	61.7	46
SD04	A	0	0.5	123	52.4	54.7	2910	118	2300	3030	170	2360	1400
		0.5	1	4.78	2.24	2.7	2970	131	2600	2970	133	2610	1200
		1	1.5	4.21	1.85	2.27	1180	36.7	701	1180	38.6	704	560
		1.5	2	4.72	1.67	2.08	1790	58	1100	1800	59.8	1100	1100
SD05	A	0	0.5	8.3	6.15	6.08	11000	393	7520	11000	399	7520	5500
SD06	A	0	0.5	144	97.4	98.9	110000	5280	105000	110000	5370	105000	44000
		0.5	1	--	--	--	--	--	--	--	--	--	62000
		1	1.5	2.06	1.23	1.29	6300	92.7	1560	6300	94	1560	1700
		1.5	2	2.71	1.68	1.8	8500	151	2660	8500	152	2660	3500
		2	2.5	5.17	3.27	3.41	32800	138	27000	32800	1380	27000	10000
		2.5	3	4.56	3.37	3.5	4710	49.8	767	4710	53.2	770	2000
SD07	A	0	0.5	72.8	48.9	49.5	79900	3770	75000	79900	3820	75100	40000
		0.5	1	--	--	--	--	--	--	--	--	--	53000
SD08	A	0	0.5	5.6	5.66	5.71	17300	829	16500	17300	835	16500	10000
		0.5	1	--	--	--	--	--	--	--	--	--	7400
SD09	A	0	0.5	89.1	41.3	42.7	15000	615	12000	15100	657	12100	7500
		0.5	1	--	--	--	--	--	--	--	--	--	26000
SD10	A	0	0.5	18.3	8.36	8.65	5640	217	4210	5650	226	4220	2900
SD11	A	0	0.5	24.4	11.4	11.7	5840	223	4310	5860	234	4320	2900
SD12	A	0	0.5	14.3	7.11	7.29	14600	568	11000	14700	575	11000	7100
		0	0.5	16.5	8.26	8.47	79100	3770	75100	79100	3780	75100	34000
SD13	B	0	0.5	1.4	1.15	1.99	983	26.9	491	984	28	493	310
SD14	B	0	0.5	3.01	1.69	1.97	4570	216	4300	4570	218	4300	2100
		0.5	1	--	--	--	--	--	--	--	--	--	690
		1	1.5	1.52	1.09	1.5	1730	75.7	1500	1730	76.8	1500	730
		1.5	2	4.27	2.9	2.96	2010	78.6	1550	2010	81.5	1550	1800
SD15	B	0	0.5	2.18	1.09	1.18	1630	75.6	1500	1630	76.7	1500	950
SD16	B	0	0.5	2.61	1.3	1.51	1350	47.2	901	1360	48.5	902	460
SD17	B	0	0.5	0.365	0.218	0.23	460	18.9	370	4600	19.1	371	230
SD18	B	0	0.5	1.7	0.979	1.08	533	22.2	436	534	23.1	437	270
		0.5	1	--	--	--	--	--	--	--	--	--	680
SD19	B	0	0.5	3.66	1.91	2.17	1800	78.6	1550	1800	80.5	1550	930
		0.5	1	--	--	--	--	--	--	--	--	--	2600
		1	1.5	3.85	2.19	2.27	1810	67.1	1300	1810	69.3	1300	3002
		1.5	2	18.2	4.29	5	2130	95.7	1900	2150	100	1910	1500
SD20	B	0	0.5	2.62	1.31	1.58	685	28.1	551	688	29.4	553	290
		0.5	1	--	--	--	--	--	--	--	--	--	910
SD21	C	0	0.5	0.82	0.361	0.395	590	25.4	501	591	25.7	501	330
SD22	C	0	0.5	10.3	6.34	6.55	6140	256	5000	6150	262	5010	2600
		0.5	1	--	--	--	--	--	--	--	--	--	2300
		1	1.5	1.83	0.908	0.933	860	37.4	741	862	38.4	742	270
		1.5	1.9	2.58	1.33	1.43	1100	44.4	871	1100	45.7	872	402
SD23	C	0	0.5	1.04	0.482	0.541	540	19.7	381	541	20.2	381	240
		0.5	1	--	--	--	--	--	--	--	--	--	150
SD24	C	0	0.5	2.72	1.46	1.75	2010	93.2	1850	2010	94.7	1850	1200
		0.5	1	--	--	--	--	--	--	--	--	--	760
SD25	C	0	0.5	0.788	0.54	0.548	523	22.3	441	523	22.9	441	220
		0.5	1	--	--	--	--	--	--	--	--	--	950
SD26	C	0	0.5	3.38	1.41	1.64	805	35.4	701	808	36.8	702	410
SD27	C	0	0.5	0.806	0.438	0.486	415	16.6	326	416	17.1	326	200
SD28	C	0	0.5	3.08	1.34	1.55	2450	104	2050	2450	106	2050	1300
		0.5	1	5.03	2.78	2.97	2310	49.9	903	2310	52.7	906	1500
		1	1.5	3.96	2.26	2.55	888	26.5	496	892	28.7	499	1400
		1.5	2	--	--	--	--	--	--	--	--	--	730
SD29	D	0	0.5	0.261	0.197	0.195	163	3.65	65.5	163	3.85	65.7	20
SD30	D	0	0.5	0.259	0.195	0.189	150	3.37	60.5	150	3.56	60.7	20
SD31	D	0	0.5	0.245	0.194	0.197	163	3.65	65.5	163	3.84	65.7	23

TABLE 8-13 (con't)

Exposure Point Concentrations for Sediment: Little Brier Creek and Tributaries

Location	Reach	Depth (feet)	Parameter											Aroclor 1260 ug/kg
			Dioxins/furans TEQ			PCB Congener TEQ			D/F & PCB TEQ					
			Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/ Mammals * II	Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg			
SD32	D	0.5	1	21.4	11.6	12.6	3260	127	2500	5280	139	2520	4200	
SD33	D	0	0.5	1.45	0.612	0.652	190	5	92.5	191	5.61	93.2	25	
SD34	D	0	0.5	0.293	0.214	0.206	163	3.65	65.5	163	3.86	65.7	36	
SD35	D	0	0.25	0.285	0.238	0.225	163	3.65	65.5	163	3.89	65.8	29	
SD36	D	0	0.66	1.4	0.74	0.971	250	7.91	151	251	8.65	152	110	
SD37	D	1.25	1.66	2.66	1.47	1.82	608	19.5	371	610	21	373	580	
SD50A	A	0	1	--	--	--	--	--	--	--	--	--	1500	
SD51A	A	0	1	--	--	--	--	--	--	--	--	--	360	
SD51B		1	2	--	--	--	--	--	--	--	--	--	24	
SD51C		2	3	--	--	--	--	--	--	--	--	--	14	
SD52A	A	0	1	--	--	--	443	8.6	209	443	8.6	209	2500	
SD53A	A	0	1	--	--	--	1610	78.3	2000	1610	78.3	2000	11000	
SD54A	A	0	1	--	--	--	--	--	--	--	--	--	6400	
SD54B		1	2	--	--	--	--	--	--	--	--	--	1600	
SD54C		2	3	--	--	--	--	--	--	--	--	--	2300	
SD55A	A	0	1	--	--	--	--	--	--	--	--	--	3500	
SD56A	A	0	1	--	--	--	--	--	--	--	--	--	20000	
SD57A	A	0	1	--	--	--	--	--	--	--	--	--	6900	
SD57B		1	2	--	--	--	--	--	--	--	--	--	2700	
SD57C		2	3	--	--	--	--	--	--	--	--	--	360	
SD58A	A	0	1	--	--	--	--	--	--	--	--	--	27000	
SD59A	A	0	1	--	--	--	--	--	--	--	--	--	2700	
SD60A	A	0	1	--	--	--	--	--	--	--	--	--	780	
SD60B		1	2	--	--	--	--	--	--	--	--	--	330	
SD60C		2	3	--	--	--	--	--	--	--	--	--	350	
SD61A	A	0	1	--	--	--	--	--	--	--	--	--	3500	
SD62A	A	0	1	--	--	--	590	29	700	590	29	700	25000	
SD32	D	0	1	--	--	--	--	--	--	--	--	--	45	
SD37	D	1.5	2.5	--	--	--	--	--	--	--	--	--	310	
SD34	D	2	2.5	--	--	--	--	--	--	--	--	--	44	
Frequency of Detection				52/52	52/52	52/52	55/55	55/55	55/55	55/55	55/55	55/55	67/69	
Minimum				0.245	0.194	0.189	150	3.37	60.5	150	3.56	60.7	14	
Maximum				144	97.4	98.9	110000	5280	105000	110000	5370	105000	62000	
95%UCL*				38.0	21.5	10.5	12986	532	12640	13411	639	12654	16456	
Bias				a	a	b	b	b	b	b	b	b	b	

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

* 95 percent upper confidence limit (95UCL) was calculated using ProUCL, Version 3.0.

a = 97.5% Chebyshev (Mean, SD) UCL

b = 95% H-UCL

The exposure point concentration is the 95% UCL concentration.

PCB = Polychlorinated biphenyl.

D/F = Dioxin/furan.

TABLE 8-14

Exposure Point Concentrations for Sediment: Banks of Little Brier Creek and Tributaries

Location	Depth (feet)		Dioxins/furans TEQ			Parameter PCB Congener TEQ			D/F & PCB TEQ			Aroclor 1260 ng/kg
			Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	
SD05	0	0.5	144	97.4	98.9	110000	5280	105000	110000	5370	105000	44000
	0.5	1	--	--	--	--	--	--	--	--	--	62000
	1	1.5	2.06	1.23	1.29	5200	32.7	1540	6300	94	1560	1700
	1.5	2	2.71	1.58	1.8	8500	151	2640	6500	152	2650	3500
	2	2.5	5.17	3.27	3.41	32800	138	27000	32800	1380	27000	10000
SD08	2.5	3	4.56	3.37	3.5	4710	49.8	767	4710	53.2	770	2000
	0	0.5	8.6	5.66	5.71	17300	829	16500	17300	835	16500	10000
	0.5	1	--	--	--	--	--	--	--	--	--	7400
SD10	0	0.5	18.3	8.35	8.65	3640	317	4210	3650	226	4220	2900
SD12	0	0.5	14.3	7.11	7.29	14600	568	11000	14700	575	11000	7100
	0	0.5	15.5	8.26	8.47	79100	3770	75100	79100	3780	75100	24000
SD14	0	0.5	3.01	1.62	1.97	4570	316	4300	4570	218	4300	2100
	0.5	1	--	--	--	--	--	--	--	--	--	690
	1	1.5	1.52	1.09	1.3	1750	75.7	1530	1750	76.8	1500	730
	1.5	2	4.27	2.9	2.95	2010	78.6	1550	2010	81.5	1550	1800
SD16	0	0.5	2.61	1.3	1.31	1350	47.2	901	1350	48.5	902	460
SD18	0	0.5	1.7	0.979	1.08	535	22.2	436	534	23.1	437	270
	0.5	1	--	--	--	--	--	--	--	--	--	580
SD20	0	0.5	2.62	1.31	1.38	685	28.1	551	687	29.2	552	390
	0.5	1	--	--	--	--	--	--	--	--	--	910
SD22	0	0.5	13.1	6.34	6.55	1140	256	5000	6150	262	5010	2600
	0.5	1	--	--	--	--	--	--	--	--	--	2300
	1	1.5	1.63	0.908	0.933	860	37.4	741	862	38.4	742	270
	1.5	2	3.56	1.33	1.43	1100	444	871	1100	45.7	872	400
SD24	0	0.5	2.72	1.46	1.75	2010	93.2	1550	2010	94.7	1550	1200
	0.5	1	--	--	--	--	--	--	--	--	--	750
SD26	0	0.5	3.38	1.41	1.54	905	35.4	701	805	36.8	702	410
SD28	0	0.5	3.08	1.34	1.55	2450	104	2050	2450	106	2050	1300
	0.5	1	5.09	2.79	2.97	2310	49.9	903	2310	52.7	905	1300
	1	1.5	3.96	2.26	2.55	888	25.5	495	892	28.7	499	1400
	1.5	2	--	--	--	--	--	--	--	--	--	730
Frequency of Detection			23/33	11/31	11/31	11/31	11/31	11/31	11/31	11/31	11/31	23/33
Minimum			1.52	0.91	0.93	532	22.2	436	534	23.1	437	270
Maximum			144	97	98.9	110000	5280	105000	110000	5370	105000	62000
95%UCL*			69.42	46.3	47.1	27364	3090	52524	27353	3158	62525	29969
Basis			a	a	a	b	a	a	a	a	a	a

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations

* 95 percent upper confidence limit (95UCL) was calculated using ProUCL, Version 3.0.

a = 99% Chebyshev (Mean, SD) UCL

b = 95% Chebyshev MVUE UCL

PCB = Polychlorinated biphenyl.

D/F = Dioxin/furan

The exposure point concentration is the 95% UCL concentration.

The higher of duplicate samples used; used lower detection limit if both non-detects or detected concentration if one detect and one non-detect.

TABLE 8-15

**Exposure Point Concentrations for Sediment
Brier Creek Reservoir**

Location	Parameter									
	PCB Congener TEQ			Dioxins/furans TEQ			D/F & PCB TEQ			Aroclor 1260 ug/kg
	Birds ng/kg	Fish ug/kg	Humans/Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/Mammals ng/kg	
PS01	318	11.4	221	0.845	0.764	1.01	318	12.2	223	57
PS02	398	6.46	115	6.83	6.35	6.97	294	12.8	123	94
PS03	388	8.7	159	8.13	7.4	8.22	396	16.1	164	110
SD63A	0.0645	5.15	1.56	--	--	--	--	--	--	310
SD63B	--	--	--	--	--	--	--	--	--	45 U
SD64A	--	--	--	--	--	--	--	--	--	47
SD64B	--	--	--	--	--	--	--	--	--	42 U
SD65A	--	--	--	--	--	--	--	--	--	42 U
SD65B	--	--	--	--	--	--	--	--	--	42 U

-- = Not analyzed

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical.

TABLE 8-16

**Exposure Point Concentrations for Sediment
Brier Creek (Below Brier Creek Reservoir)**

Location	Parameter			
	PCB Congener TEQ			Aroclor 1260
	Birds	Fish	Humans/Mammals	ug/kg
	ng/kg	ng/kg	ng/kg	
SD38	163	3.65	65.5	43 U
SD66A	0.028	1.06	0.589	280
SD66B	—	—		59

U = Not detected.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical.

TABLE 8-17

**Exposure Point Concentrations for Sediment
Lake Crabtree**

Location	Parameter			
	PCB Congener TEQ (Birds) ng/kg	PCB Congener TEQ (Fish) ng/kg	PCB Congener TEQ (Humans/Mammals) ng/kg	PCB-1260 (Aroclor 1260) ug/kg
SD39	1360	55.9	1100	480
SD40	208	4.46	79.7	1.6
SD41	62.0	1.30	23.2	5.7
SD67A	0.049	2.60	1.1	150
SD67B	--	--	--	19
SD68A	--	--	--	120 U
SD68B	--	--	--	42 U
SD69A	0.00006	0.0041	0.0014	120
SD69B	--	--	--	110
SD70A	--	--	--	180
SD70B	--	--	--	99
SD71A	0.023	1.02	0.46	17
SD71B	--	--	--	41 U
SD72A	--	--	--	39 U
SD73A	--	--	--	43 U
SD74A	--	--	--	42 U
SD75A	--	--	--	40 U
SD76A	--	--	--	41 U
SD77A	--	--	--	40 U
SD78A	--	--	--	40 U

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical.

PCB = Polychlorinated biphenyl.

-- = Not analyzed.

TABLE 8-18

**Exposure Point Concentrations for Sediment
Crabtree Creek**

Location	PCB Congener TEQ (ug/kg)			Aroclor 1260 (ug/kg)
	Birds	Fish	Humans/Manunals	
SD46	230	5.17	92.8	58 U
SD47	243	5.45	97.9	60 U
SD49	250	5.62	101	63 U
SD80A	--			41 U
SD81A	--	--	--	41 U
SD82A	--	--	--	43 U
SD83A	--	--	--	43 U
SD84A	0.020	0.85	0.41	40 U
SD84B	--	--	--	39 U
SD85A	--	--	--	49 U
SD86A	--	--	--	42 U

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical.

PCB = Polychlorinated biphenyl.

-- = Not analyzed.

The higher of duplicate samples used; used lower detection limit if both non-detects or detected concentration if one detect and one non-detect.

TABLE 8-19
Exposure Point Concentrations for Floodplain Surface Soil

Location	Parameter (ug/kg)			
	PCB Congener TEQ (Birds)	PCB Congener TEQ (Fish)	PCB Congener TEQ (Humans/Mammals)	Aroclor 1260
Little Brier Creek Reach A & Reach D				
SS117A	--	--	--	1100
SS118A	--	--	--	640
SS119A	--	--	--	48
Brier Creek Reservoir - Middle & Lower				
SS120A	--	--	--	38 U
SS121A	--	--	--	48
SS122A	--	--	--	38 U
Crabtree Creek				
SS130A	--	--	--	39 U
Lake Crabtree - Sector A, B & C				
SS123A				39 UJ
SS124A	2.32E-05	0.00102	0.000456	39 U
SS137A (Dup 124A)	2.66E-05	0.00116	0.000523	39 U
SS125A	--	--	--	37 U
SS126A	--	--	--	39 U
SS127A	--	--	--	38 U
SS128A	--	--	--	41 U
SS129A	--	--	--	38 U
SS131A	--	--	--	39 U
SS132A	--	--	--	55 U
SS133A	--	--	--	44 U
SS134A	--	--	--	47 U
SS 138A (Dup 134A)	--	--	--	44 U
SS135A	--	--	--	41 U
SS136A		--	--	41 U

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations. The exposure point concentration is in bold, and is the maximum concentration within each floodplain area.

PCB = Polychlorinated biphenyl.

-- = Not analyzed.

U = Not detected above detection limit.

J = Estimated value.

The higher of duplicate samples used; used lower detection limit if both non-detects or detected concentration if one detect and one non-detect.

TABLE 8-20
Hazard Quotients for Benthic Invertebrates

Location	Concentration (mg/kg)		Screening Benchmark EPA Region 4 (1995a)	Hazard Quotient	
	Maximum	95% UCL		Maximum	95% UCL
Little Brier Creek and Tributaries					
Dioxins/furans TEQ - fish	9.7E-05	2.2E-05	2.5E-06	3.9E+01	8.6E+00
PCB Congener TEQ - fish	5.3E-03	5.3E-04	2.5E-06	2.1E+03	2.1E+02
D/F & PCB TEQ fish	5.4E-03	6.4E-04	2.5E-06	2.1E+03	2.6E+02
Aroclor 1260	6.2E+01	1.6E+01	3.0E-02	2.1E+03	5.5E+02
Brier Creek Reservoir					
Dioxins/furans TEQ - fish	1.61E-05	--	2.5E-06	6.4E+00	--
PCB Congener TEQ - fish	1.14E-05	--	2.5E-06	4.6E+00	--
D/F & PCB TEQ fish	1.28E-05	--	2.5E-06	5.1E+00	--
Aroclor 1260	3.1E-01	--	3.0E-02	1.0E+01	--
Below Brier Creek Reservoir					
Dioxins/furans TEQ - fish	--	--	2.5E-06	--	--
PCB Congener TEQ - fish	3.7E-06	--	2.5E-06	1.5E+00	--
D/F & PCB TEQ fish	3.7E-06	--	2.5E-06	1.5E+00	--
Aroclor 1260	0.28	--	1.0E+00	2.8E-01	--
Lake Crabtree					
Dioxins/furans TEQ - fish	--	--	2.5E-06	--	--
PCB Congener TEQ - fish	5.6E-05	--	2.5E-06	2.2E+01	--
D/F & PCB TEQ fish	5.6E-05	--	2.5E-06	2.2E+01	--
Aroclor 1260	4.8E-01	--	3.0E-02	1.6E+01	--
Crabtree Creek					
Dioxins/furans TEQ - fish	--	--	2.5E-06	--	--
PCB Congener TEQ - fish	5.6E-06	--	2.5E-06	2.2E+00	--
D/F & PCB TEQ fish	5.6E-06	--	2.5E-06	2.2E+00	--
Aroclor 1260	--	--	3.0E-02	--	--

All concentrations in mg/kg

TEQ = Toxic equivalent quotient

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

95% UCL = 95 percent upper confidence limit on the mean

TABLE 8-21

Hazard Quotients for Fish and Crayfish

Location	Maximum Whole Body Tissue Concentration	Fish and Aquatic Invertebrate TRV		Hazard quotient	
		NOED	LOED	NOED	LOED
Omnivorous Fish Species					
Little Brier Creek and Tributaries					
Dioxins/furans TEQ - fish	7.1E-06	1.0E-03	4.4E-03	7.1E-03	1.6E-03
PCB Congener TEQ - fish	5.7E-06	1.0E-03	4.4E-03	5.7E-03	1.3E-03
D/F & PCB TEQ fish	1.3E-05	1.0E-03	4.4E-03	1.3E-02	2.9E-03
Aroclor 1260	2.2E+01	2.2E+00	1.4E+01	1.0E+01	1.5E+00
Brier Creek Reservoir					
Dioxins/furans TEQ - fish	--	1.0E-03	4.4E-03	--	--
PCB Congener TEQ - fish	2.8E-06	1.0E-03	4.4E-03	2.8E-03	6.3E-04
D/F & PCB TEQ fish	2.8E-06	1.0E-03	4.4E-03	2.8E-03	6.3E-04
Aroclor 1260	2.4E+00	2.2E+00	1.4E+01	1.1E+00	1.7E-01
Below Brier Creek Reservoir					
Dioxins/furans TEQ - fish	6.7E-07	1.0E-03	4.4E-03	6.7E-04	1.5E-04
PCB Congener TEQ - fish	1.5E-06	1.0E-03	4.4E-03	1.5E-03	3.3E-04
D/F & PCB TEQ fish	2.1E-06	1.0E-03	4.4E-03	2.1E-03	4.8E-04
Aroclor 1260	5.0E-01	2.2E+00	1.4E+01	2.3E-01	3.5E-02
Lake Crabtree					
Dioxins/furans TEQ - fish	--	1.0E-03	4.4E-03	--	--
PCB Congener TEQ - fish	7.9E-07	1.0E-03	4.4E-03	7.9E-04	1.8E-04
D/F & PCB TEQ fish	7.9E-07	1.0E-03	4.4E-03	7.9E-04	1.8E-04
Aroclor 1260	7.1E-01	2.2E+00	1.4E+01	3.3E-01	5.0E-02
Crabtree Creek					
Dioxins/furans TEQ - fish	--	1.0E-03	4.4E-03	--	--
PCB Congener TEQ - fish	3.3E-07	1.0E-03	4.4E-03	3.3E-04	7.4E-05
D/F & PCB TEQ fish	3.3E-07	1.0E-03	4.4E-03	3.3E-04	7.4E-05
Aroclor 1260	3.4E-01	2.2E+00	1.4E+01	1.6E-01	2.4E-02

TABLE 8-21 (con't)
Hazard Quotients for Fish and Crayfish

Location	Maximum Whole Body Tissue Concentration	Fish and Aquatic Invertebrate TRV		Hazard (rodent)	
		NOED	LOED	NOED	LOED
Carnivorous Fish Species					
Little Brier Creek and Tributaries					
Dioxins/furans TEQ - fish	6.0E-06	1.3E-04	2.2E-03	4.8E-02	2.5E-03
PCB Congener TEQ - fish	2.3E-05	1.3E-04	2.2E-03	1.9E-01	1.1E-02
D/F & PCB TEQ fish	2.9E-05	1.3E-04	2.2E-03	2.3E-01	1.4E-02
Aroclor 1260	7.5E+01	1.4E-01	1.1E+00	5.4E+02	6.8E+01
Brier Creek Reservoir					
Dioxins/furans TEQ - fish	6.6E-07	1.3E-04	2.2E-03	5.3E-03	3.1E-04
PCB Congener TEQ - fish	8.0E-06	1.3E-04	2.2E-03	6.4E-02	3.7E-03
D/F & PCB TEQ fish	8.7E-06	1.3E-04	2.2E-03	6.9E-02	4.0E-03
Aroclor 1260	2.5E+00	1.4E-01	1.1E+00	1.8E+01	2.3E+00
Below Brier Creek Reservoir					
Dioxins/furans TEQ - fish	3.9E-07	1.3E-04	2.2E-03	3.1E-03	1.8E-04
PCB Congener TEQ - fish	1.5E-06	1.3E-04	2.2E-03	1.2E-02	6.7E-04
D/F & PCB TEQ fish	1.8E-06	1.3E-04	2.2E-03	1.5E-02	8.5E-04
Aroclor 1260	4.9E-01	1.4E-01	1.1E+00	3.5E+00	4.5E-01
Lake Crabtree					
Dioxins/furans TEQ - fish	3.2E-07	1.3E-04	2.2E-03	2.5E-03	1.5E-04
PCB Congener TEQ - fish	1.5E-06	1.3E-04	2.2E-03	1.2E-02	7.0E-04
D/F & PCB TEQ fish	1.8E-06	1.3E-04	2.2E-03	1.5E-02	8.4E-04
Aroclor 1260	9.0E-01	1.4E-01	1.1E+00	6.4E+00	8.2E-01
Crabtree Creek					
Dioxins/furans TEQ - fish	--	1.3E-04	2.2E-03	--	--
PCB Congener TEQ - fish	3.3E-07	1.3E-04	2.2E-03	2.6E-03	--
D/F & PCB TEQ fish	3.3E-07	1.3E-04	2.2E-03	2.6E-03	--
Aroclor 1260	5.9E-01	1.4E-01	1.1E+00	4.2E+00	5.4E-01

Location	Maximum Whole Body Tissue Concentration	Fish and Aquatic Invertebrate TRV		Hazard Quotient	
		NOED	LOED	NOED	LOED
Aquatic Invertebrate Species					
Little Brier Creek and Tributaries					
Dioxins/furans TEQ - fish	4.6E-06	8.6E-03	--	5.3E-04	--
PCB Congener TEQ - fish	5.1E-06	8.6E-03	--	5.9E-04	--
D/F & PCB TEQ fish	9.6E-06	8.6E-03	--	1.1E-03	--
Aroclor 1260	1.1E+01	4.0E-02	5.8E+00	2.8E+02	1.9E+00
Brier Creek Reservoir					
Dioxins/furans TEQ - fish	--	8.6E-03	--	--	--
PCB Congener TEQ - fish	--	8.6E-03	--	--	--
D/F & PCB TEQ fish	--	8.6E-03	--	--	--
Aroclor 1260	--	4.0E-02	5.8E+00	--	--
Below Brier Creek Reservoir					
Dioxins/furans TEQ - fish	3.2E-07	8.6E-03	--	3.7E-05	--
PCB Congener TEQ - fish	1.4E-06	8.6E-03	--	1.7E-04	--
D/F & PCB TEQ fish	1.7E-06	8.6E-03	--	2.0E-04	--
Aroclor 1260	7.4E-02	4.0E-02	5.8E+00	1.9E+00	1.3E-02
Lake Crabtree					
Dioxins/furans TEQ - fish	--	8.6E-03	--	--	--
PCB Congener TEQ - fish	--	8.6E-03	--	--	--
D/F & PCB TEQ fish	--	8.6E-03	--	--	--
Aroclor 1260	--	4.0E-02	5.8E+00	--	--
Crabtree Creek					
Dioxins/furans TEQ - fish	--	8.6E-03	--	--	--
PCB Congener TEQ - fish	2.8E-07	8.6E-03	--	3.2E-05	--
D/F & PCB TEQ fish	2.8E-07	8.6E-03	--	3.2E-05	--
Aroclor 1260	1.8E-01	4.0E-02	5.8E+00	4.5E+00	3.1E-02

Notes:

All concentrations in mg/kg.

-- = Receptor or contaminant not evaluated.

TEQ = Toxic equivalent quotient

PCB = Polychlorinated biphenyl

TRV = Toxicity reference value

NOED = No observable effect concentration

LOED = Lowest observable effect concentration.

Tissue data for all species collected within the reach are presented. The same species were not found in each reach. See Tables 3-1 through 3-5 for species collected from each reach.

Omnivorous fish species include catfish and bullhead.

Carnivorous fish species include sunfish and bass.

Aquatic invertebrate species is crayfish.

TABLE 8-22

Hazard Quotients for Plants and Other Soil-Dwelling Organisms
Ward Transformer Site
Raleigh, North Carolina
(All concentrations in mg/kg)

Location	Concentration		Soil Benchmarks		Hazard Quotient - Region 4 Screening Level- Other Soil-Dwelling Organisms		Hazard Quotient - Plants	
	Maximum	EPC	EPA Region 4	Plants	Maximum Concentration	EPC	Maximum Concentration	EPC
Banks of Little Brier Creek and Tributaries								
Aroclor 1260	62	30	2.00E-02	4.00E+01	3.1E+03	1.5E+03	1.6E+00	7.5E-01
PCB Congener TEQ (mammal)	1.05E-01	6.26E-02	--	--	--	--	--	--
Dioxin/Furan TEQ (mammal)	9.89E-05	4.71E-05	--	--	--	--	--	--
Dioxin/Furan + PCB TEQ (mammal)	1.05E-01	6.26E-02	--	--	--	--	--	--
Little Brier Creek and Tributaries Floodplain*								
Aroclor 1260	1.1	0.596	2.00E-02	4.00E+01	5.5E+01	3.0E+01	2.8E-02	1.5E-02
Brier Creek Reservoir Floodplain								
Aroclor 1260	0.048	--	2.00E-02	14.00E+01	2.4E+00	--	1.2E-03	--
Lake Crabtree Floodplain								
Aroclor 1260	ND	ND	2.00E-02	4.00E+01	--	--	--	--
PCB Congener TEQ (mammal)	5.23E-07	--	--	--	--	--	--	--

-- Soil benchmark not available.

* Value presented for EPC is the arithmetic average of three composite samples from this area; remaining EPCs are 95% UCLs.

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TABLE 8-24
Hazard Quotients for Banks of Little Brier Creek and Tributaries

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Bank Soil I	Tissue	Surface Water I	Total	Bank Soil I	Tissue	Water	Total
Maximum Substrate Concentration								
<i>Robin</i>								
Aroclor 1260	1.2E+01	8.7E+03	2.0E-03	8.7E+03	1.2E+00	8.7E+02	2.0E-04	8.7E+02
PCB Congener TEQ (bird)	2.8E+02	1.9E+05	--	1.9E+05	2.8E+01	1.9E+04	--	1.9E+04
Dioxin/Furan TEQ (bird)	3.7E-01	2.5E+02	--	2.5E+02	3.7E-02	2.5E+01	--	2.5E+01
Dioxin/Furan + PCB TEQ (bird)	2.8E+02	1.9E+05	--	1.9E+05	2.8E+01	1.9E+04	--	1.9E+04
<i>Deer Mouse</i>								
Aroclor 1260	1.4E+00	4.4E+03	1.2E-03	4.4E+03	2.9E-01	8.8E+02	2.5E-04	8.8E+02
PCB Congener TEQ (mammal)	3.5E+02	1.0E+06	--	1.0E+06	3.5E+01	1.0E+05	--	1.0E+05
Dioxin/Furan TEQ (mammal)	3.3E-01	9.7E+02	--	9.7E+02	3.3E-02	9.7E+01	--	9.7E+01
Dioxin/Furan + PCB TEQ (mammal)	3.5E+02	1.0E+06	--	1.0E+06	3.5E+01	1.0E+05	--	1.0E+05
95% UCL Substrate Concentration								
<i>Robin</i>								
Aroclor 1260	6.0E+00	4.2E+03	2.0E-03	4.2E+03	6.0E-01	4.2E+02	2.0E-04	4.2E+02
PCB Congener TEQ (bird)	7.0E+01	4.7E+04	--	4.7E+04	7.0E+00	4.7E+03	--	4.7E+03
Dioxin/Furan TEQ (bird)	1.8E-01	1.2E+02	--	1.2E+02	1.8E-02	1.2E+01	--	1.2E+01
Dioxin/Furan + PCB TEQ (bird)	7.0E+01	4.7E+04	--	4.7E+04	7.0E+00	4.7E+03	--	4.7E+03
<i>Deer Mouse</i>								
Aroclor 1260	6.9E-01	2.1E+03	1.2E-03	2.1E+03	1.4E-01	4.3E+02	2.5E-04	4.3E+02
PCB Congener TEQ (mammal)	2.1E+02	6.1E+05	--	6.1E+05	2.1E+01	6.1E+04	--	6.1E+04
Dioxin/Furan TEQ (mammal)	1.6E-01	4.6E+02	--	4.6E+02	1.6E-02	4.6E+01	--	4.6E+01
Dioxin/Furan + PCB TEQ (mammal)	2.1E+02	6.1E+05	--	6.1E+05	2.1E+01	6.1E+04	--	6.1E+04

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

95UCL = 95% upper confidence limit on the mean

-- = Exposure medium or contaminant not evaluated for this receptor.

TABLE 8-25

Hazard Quotients for Brier Creek Reservoir and Floodplain

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Soil	Sediment	Tissue	Total	Soil	Sediment	Tissue	Total
<i>Mink</i>								
Aroclor 1260	--	1.1E-03	3.8E+00	3.8E+00		2.3E-04	7.7E-01	7.7E-01 <1
PCB Congener TEQ (mammal)	--	1.2E-01	1.8E+01	1.8E+01	--	1.2E-02	1.8E+00	1.8E+00
Dioxin/Furan TEQ (mammal)	--	8.9E-02	1.6E-01	2.5E-01 <1	--	8.9E-03	1.6E-02	2.5E-02 <1
Dioxin/Furan + PCB TEQ (mammal)	--	1.2E-01	1.8E+01	1.8E+01	--	1.2E-02	1.8E+00	1.8E+00
<i>Heron</i>								
Aroclor 1260	--	1.2E-02	1.0E+00	1.1E+00	--	1.2E-03	1.0E-01	1.1E-01 <1
PCB Congener TEQ (bird)	--	1.1E-01	8.4E-01	9.5E-01 <1	--	1.1E-02	8.4E-02	9.5E-02 <1
Dioxin/Furan TEQ (bird)	--	7.9E-02	1.0E-02	8.9E-02 <1	--	7.9E-03	1.0E-03	8.9E-03 <1
Dioxin/Furan + PCB TEQ (bird)	--	1.1E-01	8.5E-01	9.6E-01 <1	--	1.1E-02	8.5E-02	9.6E-02 <1
<i>Eagle</i>								
Aroclor 1260	--	3.3E-04	1.0E+00	1.0E+00	--	3.3E-05	1.0E-01	1.0E-01 <1
PCB Congener TEQ (bird)	--	3.0E-03	4.6E-01	4.6E-01 <1	--	3.0E-04	4.6E-02	4.6E-02 <1
Dioxin/Furan TEQ (bird)	--	2.2E-03	1.0E-02	1.3E-02 <1	--	2.2E-04	1.0E-03	1.3E-03 <1
Dioxin/Furan + PCB TEQ (bird)	--	3.0E-03	4.7E-01	4.7E-01 <1	--	3.0E-04	4.7E-02	4.7E-02 <1
<i>American robin</i>								
Aroclor 1260	9.6E-03	--	6.8E+00	6.8E+00	9.6E-04	--	6.8E-01	6.8E-01 <1
<i>Deer mouse</i>								
Aroclor 1260	1.1E-03		3.4E+00	3.4E+00	2.2E-04	--	6.8E-01	6.8E-01 <1

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

= Exposure medium or contaminant not evaluated for this receptor.

TABLE 26

Hazard Quotients for Brier Creek (Below Brier Creek Reservoir)

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Sediment	Tissue	Total		Sediment	Tissue	Total	
<i>Mink</i>								
Aroclor 1260	1.0E-03	7.9E-01	7.9E-01	<1	2.1E-04	1.6E-01	1.6E-01	<1
PCB Congener TEQ (mammal)	3.6E-02	6.7E+00	6.8E+00		3.6E-03	6.7E-01	6.8E-01	<1
Dioxin/Furan TEQ (mammal)	--	1.6E-01	1.6E-01	<1	--	1.6E-02	1.6E-02	<1
Dioxin/Furan + PCB TEQ (mammal)	3.6E-02	6.9E+00	6.9E+00		3.6E-03	6.9E-01	6.9E-01	<1
<i>Heron</i>								
Aroclor 1260	1.0E-02	2.4E-01	2.5E-01	<1	1.0E-03	2.4E-02	2.5E-02	<1
PCB Congener TEQ (bird)	7.8E-02	6.7E-01	7.5E-01	<1	7.8E-03	6.7E-02	7.5E-02	<1
Dioxin/Furan TEQ (bird)	--	1.4E-02	1.4E-02	<1	--	1.4E-03	1.4E-03	<1
Dioxin/Furan + PCB TEQ (bird)	7.8E-02	6.9E-01	7.7E-01	<1	7.8E-03	6.9E-02	7.7E-02	<1
<i>Raccoon</i>								
Aroclor 1260	2.6E-01	3.0E-02	2.9E-01	<1	2.2E-03	6.1E-03	8.2E-03	<1
PCB Congener TEQ (mammal)	8.9E-02	3.7E+00	3.8E+00		3.7E-02	3.7E-01	4.1E-01	<1
Dioxin/Furan TEQ (mammal)	--	5.8E-02	5.8E-02	<1	--	5.8E-03	5.8E-03	<1
Dioxin/Furan + PCB TEQ (mammal)	8.8E-02	3.8E+00	3.9E+00		3.7E-02	3.8E-01	4.2E-01	<1

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

= Exposure medium or contaminant not evaluated for this receptor.

TABLE 8-27

Hazard Quotients for Lake Crabtree and Floodplain

COPEC	Hazard Quotient - No Effect					Hazard Quotient - Low Effect				
	Soil	Sediment	Tissue	Total		Soil	Sediment	Tissue	Total	
<i>Mink</i>										
Aroclor 1260	--	1.8E-03	1.2E+00	1.2E+00		--	3.6E-04	2.3E-01	2.3E-01	<1
PCB Congener TEQ (mammal)	--	6.0E-01	4.8E+00	5.4E+00		--	6.0E-02	4.8E-01	5.4E-01	<1
Dioxin/Furan TEQ (mammal)	--	--	7.9E-03	7.9E-03	<1	--	--	7.9E-04	7.9E-04	<1
Dioxin/Furan + PCB TEQ (mammal)	--	6.0E-01	4.8E+00	5.4E+00		--	6.0E-02	4.8E-01	5.4E-01	<1
<i>Heron</i>										
Aroclor 1260	--	1.8E-02	3.7E-01	3.9E-01	<1	--	1.8E-03	3.7E-02	3.9E-02	<1
PCB Congener TEQ (bird)	--	6.5E-01	3.4E-01	9.9E-01	<1	--	6.5E-02	3.4E-02	9.9E-02	<1
Dioxin/Furan TEQ (bird)	--	--	3.9E-03	3.9E-03	<1	--	--	3.9E-04	3.9E-04	<1
Dioxin/Furan + PCB TEQ (bird)	--	6.5E-01	3.4E-01	1.0E+00	<1	--	6.5E-02	3.4E-02	1.0E-01	<1
<i>Eagle</i>										
Aroclor 1260	--	1.6E-04	1.0E-01	1.0E-01	<1	--	1.6E-05	1.0E-02	1.0E-02	<1
PCB Congener TEQ (bird)	--	1.4E-06	1.0E-05	1.2E-05	<1	--	1.4E-07	1.0E-06	1.2E-06	<1
Dioxin/Furan TEQ (bird)	--	--	6.1E-08	6.1E-08	<1	--	--	6.1E-09	6.1E-09	<1
Dioxin/Furan + PCB TEQ (bird)	--	1.4E-06	1.0E-05	1.2E-05	<1	--	1.4E-07	1.0E-06	1.2E-06	<1
<i>American robin</i>										
PCB Congener TEQ (bird)	6.8E-06	--	4.6E-03	4.6E-03	<1	6.8E-07	--	4.6E-04	4.6E-04	<1
<i>Deer mouse</i>										
PCB Congener TEQ (mammal)	1.8E-03	--	5.1E+00	5.1E+00		1.8E-04	--	5.1E-01	5.1E-01	<1

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

= Exposure medium or contaminant not evaluated for this receptor.

TABLE 8-28

Hazard Quotients for Crabtree Creek

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Sediment	Tissue	Total		Sediment	Tissue	Total	
<i>Mink</i>								
Aroclor 1260	--	5.8E-01	5.8E-01	<1	--	1.2E-01	1.2E-01	<1
PCB Congener TEQ (mammal)	5.5E-02	1.6E+00	1.6E+00		5.5E-03	1.6E-01	1.6E-01	<1
Dioxin/Furan TEQ (mammal)	--	--	--		--	--	--	
Dioxin/Furan + PCB TEQ (mammal)	5.5E-02	1.6E+00	1.6E+00		5.5E-03	1.6E-01	1.6E-01	<1
<i>Heron</i>								
Aroclor 1260	--	2.2E+00	2.2E+00		--	2.2E-01	2.2E-01	<1
PCB Congener TEQ (bird)	1.2E+00	6.6E-01	1.9E+00		1.2E-01	6.6E-02	1.9E-01	<1
Dioxin/Furan TEQ (bird)	--	--	--		--	--	--	
Dioxin/Furan + PCB TEQ (bird)	1.2E+00	6.6E-01	1.9E+00		1.2E-01	6.6E-02	1.9E-01	<1
<i>Raccoon</i>								
Aroclor 1260	--	7.3E-02	7.3E-02	<1	--	1.5E-02	1.5E-02	<1
PCB Congener TEQ (mammal)	6.0E-01	3.8E-01	9.8E-01	<1	5.7E-02	3.8E-02	9.4E-02	<1
Dioxin/Furan TEQ (mammal)	--	--	--		--	--	--	
Dioxin/Furan + PCB TEQ (mammal)	6.0E-01	3.8E-01	9.8E-01	<1	5.7E-02	3.8E-02	9.4E-02	<1

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

-- = Exposure medium or contaminant not evaluated for this receptor.

APPENDIX C



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

30 September 2008

Michael F. Easley, Governor
William G. Ross Jr., Secretary

Mr. Luis Flores
Superfund Branch, Waste Management Division
US EPA Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303

SUBJECT: Concurrence with Record of Decision
Ward Transformer Site Operable Unit #1 (Downstream Reaches)
Raleigh, Wake County

Dear Mr. Flores:

The State of North Carolina by and through its Department of Environment and Natural Resources, Division of Waste Management (herein after referred to as "the state"), reviewed the Record of Decision (ROD) received by the Division on 29 September 2008 for the Ward Transformer Site Operable Unit #1 (Downstream Reaches) and concurs with the selected remedy, subject to the following conditions:

1. State concurrence on the ROD for this site is based solely on the information contained in the ROD received by the State on 29 September 2008. Should the State receive new or additional information which significantly affects the conclusions or amended remedy contained in the ROD, it may modify or withdraw this concurrence with written notice to EPA Region IV.
2. State concurrence on this ROD in no way binds the State to concur in future decisions or commits the State to participate, financially or otherwise, in the clean up of the site. The State reserves the right to review, overview comment, and make independent assessment of all future work relating to this site.
3. If, after remediation is complete, the total residual risk level exceeds 10^{-6} , the State may require deed recordation/restriction to document the presence of residual contamination and possibly limit future use of the property as specified in NCGS 130A-310.8

The State of North Carolina appreciates the opportunity to comment on the ROD and looks forward to working with EPA on the remedy for the subject site. If you have any questions or comments, please call Mr. Nile Testerman at 919 508-8482.

Sincerely,

Dexter R. Matthews, Director
Division of Waste Management

cc: Jack Butler, Chief, NC Superfund Section
David Lown, NC Superfund
Nile Testerman, NC Superfund

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RESPONSIVENESS SUMMARY
WARD TRANSFORMER SUPERFUND SITE
Operable Unit 1

Raleigh, Wake County
North Carolina



U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA, GEORGIA
September 2008

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I. INTRODUCTION

This Responsiveness Summary summarizes the written comments received by USEPA on the Proposed Plan for Operable Unit 1 (OU1) of the Ward Transformer Site, during the public comment period, and responses to those comments. This Responsiveness Summary also includes the transcript from the August 14, 2007, public hearing.

The RI/FS report and Proposed Plan for OU1 were made available to the public in August 2007. These and other documents can be found in the Administrative Record file and the information repository maintain at the USEPA Docket Room in Region 4 and at the North Regional Public Library in Raleigh, North Carolina. The notice of availability of these two documents was published in the Durham Herald on August 6, 2007, and the Raleigh News and Observer on August 8, 2007. A public comment period was held from August 6, 2007 to September 4, 2007. An extension to the public comment period was requested. As a result, it was extended to October 4, 2007. A public meeting was held on August 14, 2007 to present the proposed plan for OU1 to a broader community audience than those that had already been involved at the Site. This meeting was attended by approximately 40 citizens.

This Responsiveness Summary has three sections: Section I summarizes and responds to common concerns expressed by multiple commenters; Section II presents and responds to certain specific and more scientifically-based comments; and Section III includes a transcript of the August 14, 2007 public hearing.

II. COMMON CONCERNS EXPRESSED BY MULTIPLE COMMENTERS

EPA received letters and emails some supporting and others expressing concerns regarding the Preferred Alternative. The following is a summary of the common concerns received by multiple commenters and USEPA response to those concerns.

1. Additional floodplain soil samples area needed along Reaches B, C, D, and Lower Brier Creek.

EPA Response: *EPA agrees that additional floodplain soil samples are needed. The preferred alternative (Alternative 4) was modified to require floodplain soil samples to be collected along Reaches B, C, D and lower Brier Creek as part of the pre-excavation sampling program. Floodplain soil from the above-mentioned areas with PCB concentrations above 1 mg/kg will be excavated and properly disposed off-site. Sections 13 and 15 of the ROD document these additional requirements.*

2. Additional sediment samples from Lake Crabtree and Brier Creek Reservoir need to be collected.

EPA Response: *EPA agrees that additional sediment samples from Lake Crabtree and Brier Creek Reservoir need to be collected. Additional samples will be collected from these areas as part of the MNR component of the Selected Remedy as documented in Section 13 of the ROD.*

3. Evaluate impact of the any remedial activities on any sensitive or endangered species such as mussels.

EPA Response: *EPA agrees with the comment. The Selected Remedy requires that an endangered mussel evaluation be conducted prior to excavation as documented in Section 13 of the ROD.*

4. Data should be provided to citizens of Wake county and downstream communities.

EPA Response: *EPA agrees with the comment. All data and reports will be made available to citizens and stakeholders. Site documents will be available at the Site Information Repository located at the North Raleigh Public Library.*

5. EPA is only relying on Monitor Natural Recovery (MNR).

EPA Response: *The Selected Remedy does not rely on MNR only. The Selected Remedy includes a component that requires excavation of contaminated soil and sediments with PCB concentrations above 1 mg/kg along Reaches B, C, D, and Lower Brier Creek. In addition, the Selected Remedy takes into consideration the removal activities being conducted at the Ward Transformer facility, at Reach A and at some other immediate areas. Under the removal action more than 150,000 tons of PCB contaminated soil and sediment will be cleaned up. Section 13 of the ROD provides a complete description of all the components of the Selected Remedy.*

6. Direct contact with PCBs from the bottom of the Lake while conducting boating/sailing activities.

EPA Response: *PCB concentrations in the sediments from Lake Crabtree are very low. Most sediment samples collected from the Lake show non-detectable levels of PCBs. The highest detectable PCB concentration from a single sample point from Lake Crabtree is 0.48 mg/kg. Sediment with PCB levels this low; do not pose unacceptable risk due to exposure while conducting boating/sailing activities at Lake Crabtree.*

7. Make sure that Ward Transformer and the appropriate parties are held accountable for cleanup costs.

EPA Response: *EPA has been working towards identifying the Potentially Responsible Parties (PRPs) for this Site. Once the Record of Decision (ROD) is issued, these PRPs will be noticed to participate and fund the clean up actions for this Operable Unit. EPA will negotiate the terms of a consent decree with the PRPs. Successful negotiations will end with a signed consent decree between the parties and the PRPs agreeing to fund the clean up actions. If negotiations fail, EPA will conduct the clean up using federal funds and pursue reimbursement under a cost recovery action suit.*

III. SPECIFIC AND MORE SCIENTIFICALLY-BASED COMMENTS

A. Responses to Comments submitted by Environmental Stewardship Concepts on Behalf of the Upper Neuse River Keeper, Neuse River Foundation

Comments on the Proposed Plan

8. The Proposed Plan inevitably shares many of the same weaknesses as the Remedial Investigation (RI) and Feasibility Study (FS). Sampling associated with the Remedial Investigation (RI) did not adequately characterize deeper sediments or floodplain soils in upper Brier Creek. Inadequate sampling has failed to accurately describe the linkage between PCB contamination in sediments in Brier Creek Reservoir and Crabtree Creek to the levels recorded in fish tissues. "Hotspots" of contamination are likely the source of PCB's, but sediment sampling has been cursory and has not been complete enough to locate any hot spots. The strength of the Plan's proposed alternatives suffered as a result of the underestimation of risks in the Remedial Investigation. The Plan's focus on alternatives involving Monitored Natural Recovery (MNR) is primarily the result of a combination of flawed assumptions in the Feasibility Study.

EPA Response: The sampling conducted during the Remedial Investigation (RI) was sufficient to identify the environmental problems associated with the release of PCBs downstream from the Ward Transformer facility. Additional sampling, which is specified in the Selected Remedy, will be required to provide the current and more detailed delineation of the PCBs contained in downstream sediment and floodplain soils to support remedial actions. EPA agrees with the observation that additional floodplain soil characterization is needed. Additional floodplain soil characterization will be conducted prior to remedial actions in Reaches B, C and D and Lower Brier Creek.

Sediment sampling was conducted to sampler refusal in Reaches B, C and D plus Brier Creek Reservoir and Lake Crabtree. The depth of sampler refusal was considered the bottom of the sediment column, which is standard practice in the environmental industry.

The link between PCB concentrations in sediments and fish tissue has been established in the technical literature and is supported by EPA. Additional sampling is not required to establish this link in Lake Crabtree and Brier Creek Reservoir. The Feasibility Study (FS) presented site-specific Biota Sediment Accumulation Factor (BSAF) calculations to help quantify this relationship.

Local area of Reaches B, C and D may contain higher concentrations of contaminants ("hot spots"), but these "hot spots" will be identified during sampling proposed in the pre-excavation sampling program. Contamination "hot spots" are unlikely in the lake and reservoir, due to the mechanisms that determine the spread of fine sediments (containing sorbed PCBs) across the water bodies. Two areas where higher contaminant concentrations might be anticipated are the locations where the creeks empty into the reservoir and lake. Sediment samples collected in these areas showed slightly higher PCB concentrations, but not concentrations which would be considered "hot spots." Given that the site-specific BSAF values are consistent with those developed for other PCB sites and that fish integrate

exposure throughout their respective home ranges, "hot spots" are not expected to be present in the two reservoirs. Additional sampling has been proposed for the lake and reservoir as part of the MNR component of the Selected Remedy. This additional sampling will help verify the distribution of PCBs across Lake Crabtree and Brier Creek Reservoir.

9. The Feasibility Study inaccurately concluded that the decrease in PCB concentrations further away from the Ward Transformer site are the result of a natural "recovery," when it is more a function of the persistence of PCBs and the time sediments have had to travel downstream. The final factor skewing the plan towards Monitored Natural Recovery (MNR) is the assumption used in the Feasibility Study that actions protective of human health would also protect wildlife. This assumption is not the case as the Monitored Natural Recovery (MNR) alternative leaves contamination at current levels in some areas that is high enough to affect wildlife, and institutional controls such as fish consumption advisories do nothing to lower PCB concentrations in fish. As noted in the Feasibility Study and below in our comments on the same document, Monitored Natural Recovery (MNR) has a mixed track record at best and should be dropped as an alternative for areas with PCB's levels above 0.5 ppm. Several species of fish and mammals are known to be more sensitive to PCBs than are humans, and the cleanup needs to protect these species as well.

EPA Response: EPA fully understands the persistence of PCBs in the environment and knows the historical timeline of PCB use at the Ward Transformer facility. PCBs in sediment have had ample time to travel downstream to the Neuse River. Time is not a primary factor determining PCB distribution at this site. The current distribution of PCBs is primarily related to the erosional and depositional processes at work on the sediment in the Crabtree Creek watershed. The persistence of PCBs in the environment was assumed when the preferred remedial alternative was selected.

One of the remedial goals for the project is to reduce PCB concentrations in aquatic biota (primarily fish) to levels that are safe for human consumption. Achievement of this goal will also help protect sensitive fish, birds, and mammals.

EPA proposed Monitored Natural Recovery (MNR) for Brier Creek Reservoir, Lake Crabtree and the lower portion of Crabtree Creek. No sediment samples collected from these three water bodies has exceeded 0.5 ppm for total PCBs. MNR is a viable alternative for these three water bodies, based on the criteria presented in the comment.

10. The plan's failure to address floodplain soils is also a major flaw. These soils act as both sources and sinks for PCBs in aquatic systems. Severe weather and associated flash flooding actively transport contaminated sediments from flood banks downstream. Any gains made from removing contaminated sediments from within the stream itself will be lost over time as PCBs slowly migrate from floodplain soils back into stream sediments. The proposed removal actions in reaches B, C, and D (Brier Creek and its unnamed tributary) should be expanded to include contaminated floodplain soils.

EPA Response: EPA agrees that floodplain soils in Reaches B, C and D need to be addressed to ensure that all potential sources of PCB contamination have been remediated

along the creeks downstream of the Ward Transformer facility. Additional sampling associated with the Remedial Design and the pre-excavation sampling program component of the Selected Remedy will be conducted. Floodplain soil will be cleaned up to meet the 1 mg/kg remedial goal for PCBs. Sections 13 and 15 document the requirement for floodplain soil sampling and remediation.

11. It is also important to include discussions of remedial actions at the Ward Site itself (OU0) when considering contamination farther downstream. The contamination in downstream waters below the Ward Site (OU1) is the direct result of PCB runoff from the original Ward Transformer site. The effectiveness of the cleanup of the Ward Site itself will have direct implications on the success of any efforts in Brier Creek Reservoir, Crabtree Lake and other waters. This part of the cleanup represents a critical element of source control for Brier Creek Reservoir and Crabtree Lake (OU1) and cannot be ignored.

EPA Response: EPA agrees that cleanup of the Ward facility itself and all other areas being address under the Time-Critical Removal Action are critical in controlling the primary source of PCBs to the Crabtree Creek watershed. EPA is coordinating all Site response actions to ensure success.

12. Recent publications (Lehmann 2006 and Lehmann et al., 2007) present alarming results of bioassays on clams exposed to low levels of PCB's or to waters in the Crabtree/Brier Creek watershed system. Lehmann and co-workers performed a series of biological assays on Asiatic clams as test animals for the water quality of Brier Creek Reservoir. One series of assays involved placing clams in bags into the creeks and sampling them after 21 days. The lab phase of the work involved exposing clams to three concentrations of PCB's in controlled conditions. In both experiments, the clams suffered damage at the cellular and molecular level. The major impact on the clams was reproductive failure because the gonads were damaged by the PCB's. Clams exposed to water without PCB's, or in the reference creek not downstream from the Ward site, showed no such responses.

The remarkable result was that the field assay gave fairly clear results in terms of damage to the clams, but little variation from upstream to downstream, as occurred in the lab experiment with increasing concentrations of PCB's. The damage caused by PCB's in the lab mimicked the results observed in the field, despite the obvious inability to control the field conditions. Additionally, estimated water concentrations in the field (0.05 – 0.18 ppt) were consistent with those measured in the Remedial Investigation (RI), but were lower than the levels to which clams were exposed in the lab (1, 10 100 ppb).

The significance of the clam bioassays is that current conditions are causing biological impairment in the downstream segments of the Brier Creek system, even where sediment and water concentrations are less than action levels. Clams, as filter feeders that live in the sediment, are exposed to both dissolved PCBs and PCBs bound to sediment that is suspended or on the immediate surface of the bottom. These waters and sediments as now sufficiently toxic to impair the reproductive system of the test clams and surely any resident clams.

These results also provide cause for concern over any rare and endangered freshwater bivalves (mussels) that may have occurred in the Brier Creek system or that may be introduced as immature mussels. Under present conditions, one can expect such mussels to die in the Brier Creek system.

Coupled with the elevated fish tissue PCB levels, the clam reproductive impairment data indicate the necessity of cleaning up the PCB sources in the Brier Creek system. If the present results are an accurate and complete characterization of the PCB contamination, then the seemingly low levels in Brier Creek Reservoir and downstream waters are far more harmful than assumed in the Remedial Investigation and Ecological Risk Assessment. On the other hand, the downstream waters may not be accurately and completely characterized and higher levels of PCBs in sediments are yet to be identified and these sediments are the source of the toxicity to clams and PCBs in fish.

The clam bioassay investigations by Lehmann (2006) and Lehmann et al. (2007) provide compelling evidence that the Brier Creek system contains PCBs in concentrations that impair the animals living there. The source investigation and cleanup need to thoroughly delineate the PCB levels throughout Brier Creek Reservoir and Crabtree Lake and in surrounding areas.

EPA Response: The published results of these clam bioassay investigations are recent. EPA will review the results to determine the relevance of the findings to the Ward Transformer Site. It should be noted that the Asiatic clam is present in abundance in the Brier Creek system based on visual observations during fish and crayfish collections performed during the Remedial Investigation sampling. While no macrobenthic invertebrate community surveys or mollusk studies were conducted, sufficient quantities of Asiatic clams are present to support foraging by raccoons based on the shell piles observed along the stream banks and the presence of shells as a component of the stream substrate. Consequently, reproductive impairment either may not be occurring in wild specimens or is not sufficient to result in their elimination from the benthic macroinvertebrate community. In addition, it is not clear whether Asiatic clams are a suitable surrogate for assessing potential effects on native macrobenthic invertebrates (including native mussel populations, if present).

Comments on the Remedial Investigation

General Issues

13. The Remedial Investigation (RI) does not give any soil sampling data for the Ward Transformer Site itself (OU0). This omission is curious because contamination in these areas have a direct effect on the contaminated tributaries and water bodies draining into the Neuse River Tributaries (OU1). The two problems are inseparable and cannot be discussed without mentioning the other. The great concern is that remedial options for each site will be developed in a vacuum.

EPA Response: The results of the soil sampling data for the Ward Transformer site are presented in separate reports, as is typical when a site is divided into different operable units. These results were utilized when preparing the OU-1 RI/FS Reports and these results

are available in the local document repository for the site located in the North Raleigh Public Library.

14. While not directly related to OU1, the RI notes frequently in its background discussions that after 1979 only transformers with lower concentrations (< 50 ppm) were processed at the site. These transformers still contained PCBs, and plans at OU0 should be reviewed to make sure that the assumption that the reconditioning of these transformers carried no risk. Contamination from PCB oil at a level of 50 ppm can easily result in contaminated soils with PCB levels well in excess of remedial targets, and even near 50 PPM, therefore the fact that PCB's were at 45 ppm in the processed equipment is no assurance that contamination is below action levels. Indeed, 50 ppm PCB is a serious contamination problem. Please see the attachment "TEQ Methodology" for a more complete explanation of how risks from PCBs and dioxins are evaluated

EPA Response: EPA agrees that transformers containing dielectric fluids with less than 50 ppm of PCBs still contain significant quantities of PCBs. However, transformers containing fluids with more than 50 ppm of PCBs obviously pose a greater risk if the fluids are released to the environment. Some common PCB-containing dielectric fluids used in transformers contain 60% PCBs by volume. Risk was characterized for OU-0 using soil data that reflected past releases from all PCB-containing materials at the Ward Transformer Site. Consequently, the ultimate sources of contamination, whether greater than or less than 50 ppm PCBs, have little relevance to the current or post-remediation risk.

Sampling

15. While the site has more fish tissue data than a number of other sites we have worked on, there is a dearth of data on soils, and sediment composition in Reach B (Little Brier Creek). A total of 20 soil samples were taken over the entire study area, hardly enough to characterize the entire floodplain. That is a mere 5 samples per reach, and most were focused on human health endpoints around Crabtree Lake and to identify continuing sources to the watershed. This is hardly enough to characterize contamination in floodplain soils. Obtaining more complete data on these soils is critical to controlling PCB contamination in the Neuse River. Floodplain soils act as both sources and sinks for PCB contaminated sediments in waterways. The RI contains no real discussion of major weather events and how they may affect contamination at the site, and this is reflected in the low number of samples taken from floodplain soils. Small streams like the unnamed tributaries to Brier and Crabtree Creeks as well as Brier and Crabtree Creeks themselves are prone to flash flooding. These floods can bring PCB and dioxin contaminated sediments far from established stream banks.

EPA Response: Additional floodplain soil samples will be collected as part of the pre-remediation sampling program. See response to comment number 10.

Climate, major storm events, and flash flooding are all discussed in the RI Report (Sections 1.4.1, 1.4.2 and 4.5) along with their significance relative to PCB migration downstream of the Ward Transformer facility.

16. Stream sediments are also insufficiently characterized. Only four sample locations examined sediments greater than 24 inches beneath the surface. The highest levels of contamination in stream sediments will correspond to peak loadings, considering the delay between spill, introduction into the waters and transport down the creek. The deepest sediments are not likely to be as contaminated as those on the surface, but it is important to characterize them in order define the depth of maximum contamination, the maximum depth of contamination and to better evaluate remedial options. Even low levels of contamination at these depths could affect dredging depths or other actions.

EPA Response: *Sediment sampling was conducted to sampler refusal in Reaches B, C and D plus Brier Creek Reservoir and Lake Crabtree. The depth of sampler refusal was considered the bottom of the sediment column, which is standard practice in the environmental industry.*

17. As noted above, there are an adequate number of fish tissue samples to characterize the site. However, the RI notes that catfish had their skins removed before they were analyzed. The reason for this is not stated. Wildlife that consume catfish and many fishermen do not remove these tissues before eating the fish, so it is unacceptable to evaluate whole body concentrations for the purposes of risk assessments without them. Other fish samples appear to have been handled properly.

EPA Response: *Catfish skins are extremely tough and are traditionally removed by recreational and commercial fisherman prior to consumption. It is standard practice in fish tissue assessments to skin scaleless fish (catfish) prior to filleting. Skins were removed only from those catfish samples collected for evaluating human risk. After removing the skin from the catfish specimens, filets were obtained including the lipid-rich belly flap portion for subsequent analysis. Whole body fish samples collected for evaluating ecological risk were submitted whole (skin-on) for analysis. Consequently, the fish sample preparation procedures that were employed were appropriate for evaluating human health and ecological risk and are not expected to result in low biased estimates.*

18. The Mayor of Raleigh created a scientific panel to evaluate the adequacy of sampling associated with the cleanup of the Ward Transformer site. Many of the sites recommended by the panel were not included in the RI. No explanation for not taking these samples was given in the report. EPA needs to address why they did not include these in the investigation.

EPA Response: *EPA conducted a community stakeholder meeting which included Task Force members, City, County and State officials, as well as interested community members among others, to put together a sampling plan designed to fill any data gaps and address any other community concern regarding potential exposure and nature and extent of contamination. Input was received regarding the number of additional samples, their locations and depths, including floodplain soil samples from recreational areas in the vicinity of Lake Crabtree, and surface and subsurface sediment concentrations in Lake Crabtree and Brier Creek Reservoir. After the meeting, EPA prepared a draft Sampling Plan describing the proposed sampling activities and sent it out for further review and input*

from the group prior to finalizing the plan. The resulting data from the sampling is contained in the Remedial Investigation Report.

Human Health Risk Assessment

19. After reviewing the Remedial Investigation (RI) portion of the document, the most disconcerting problem was not with the document, but with changes or specific rules proposed by the regulatory agencies. In particular, the soil screening values of two toxic metals (arsenic and lead) were set dangerously high at the request of NCDENR or EPA Region 4. The residential screening value for lead was set to 400 mg/kg. This value is almost twice that used in many superfund cleanups around the country. Lead is highly toxic with no lower threshold for adverse effects, particularly in children. In other words, there is no "safe" dose of lead, and any dose will result in measurable health effects (see CDC website).

After the initial draft of the RI was released, EPA Region 4 sent out a bulletin setting a PRG based on noncancer-based endpoints. The resulting chronic reference dose for children was 20 mg/kg and 160 mg/kg for adults. The 20 mg/kg concentration can be considered dangerous to adults based on risks associated with cancer, and would be highly toxic for the stated endpoint of a child's health. It is highly disconcerting that regulatory agencies would exert their influence to establish such unprotective screening levels, particularly since the result effectively prevents lead and arsenic from becoming COPCs in future investigations.

EPA Response: The reported maximum lead level in soils or sediments of the entire site was 25 mg/kg. This is far less than 200 to 400 mg/kg, and in fact is in the background range. There is no valid reason to clean up lead.

The COPC screening level used for arsenic in the human health risk assessment was 0.39 mg/kg, which is based on a residential soil cancer risk of 1E-06 (not the PRGs recommended for cleanup in the EPA Region 4 Bulletin). In this risk assessment, arsenic was selected as a COPC. Cancer risks and hazard quotients were calculated based on the conservative procedures recommended in national EPA risk assessment guidance (RAGS and related guidance documents). Arsenic cancer risks and hazard quotients in all scenarios did not exceed the trigger levels of concern for arsenic cleanup (the highest arsenic risk was 3.8E-07 and the highest arsenic hazard quotient was less than 0.01). The reason that the EPA Region 4 Technical Bulletin was cited in the Uncertainty Analysis was to determine if the calculated risk assessment results and detected soil/sediment levels in the risk assessment were consistent with cleanup policy in EPA Region 4. The PRGs that are discussed by EPA Region 4 and NCDENR (i.e., 20 mg/kg and 160 mg/kg) are not screening levels, but rather are cleanup levels. Note that the maximum arsenic concentration detected in soils or sediments at any location was 5.0 mg/kg. These values are significantly less than the 20 mg/kg EPA Region 4 PRG recommended for children (the most conservative cleanup value), and are in fact well within reported background levels.

20. The Baseline Human Health Risk Assessment (BHHRA) fails to examine an important and likely scenario: intrusive operations into the soil by construction workers in the future in the area immediately downstream from the Ward Site, Reach A. This area, Reach A, is the most contaminated Reach examined by the BHHRA, and is directly adjacent to the Ward

Transformer Site and the Ward stormwater treatment outfall. Given the pace and extent of residential development in the area, and the demand for open or green space in residential areas, the plan must envision residential use of all areas covered by the Proposed Plan.

EPA Response: *Reach A is not part of OU-I, however, the ongoing removal action will remove all Reach A sediments to levels below 1 ppm. Therefore, future construction workers will not be exposed to the levels of contamination that exist today at the Ward Transformer facility and Reach A.*

21. The report erroneously concludes that there is no risk in many of the scenarios outlined in the BHHRA. This error occurs primarily because the BHHRA uses a less protective screening value of E-04 (1 in 10,000) instead of the more appropriate E-06 (1 in 1,000,000). For many of the Chemicals of Potential Concern (COPCs), particularly PCBs and dioxins, additional health effects are routinely found at lower and lower doses. The 1 in 1,000,000 screening level was designed to provide a margin of safety for these types of pollutants. The fact that the proposed Superfund plan is based around the higher risk threshold should call into question the effectiveness of the overall plan.

EPA Response: *The conservative and health protective screening cancer risk level of 1E-06 level was used to select COPCs (not a screening level of 1E-04 as stated in the comment). The 1E-04 risk level discussed in the risk assessment relates to the risk level of concern that triggers remediation of a site. Note that it was never stated in the risk assessment that there was "no risk" from any chemical. Cancer risks may have been "insignificant" with respect to regulatory risk levels set for cleanup action.*

Ecological Risk Assessment

22. The most significant problem of the Baseline Ecological Risk Assessment (BERA) is that the focus is on PCBs, while metals and other toxic compounds are completely ignored. Other compounds weren't even screened despite the sensitivity of wildlife to many of the pollutants present such as aluminum. While PCBs and dioxins are by far the most toxic compounds released by Ward Transformer, they are not the only source of risk to wildlife. The omission of these other contaminants had a profound effect on risk estimates for wildlife.

EPA Response: *Not all contaminants warrant equal attention with regard to risk. The site managers have targeted the investigation of OU1 to the most relevant concerns. Thus, the scope of the BERA was restricted to evaluate impacts of site-related contaminants (i.e., PCB and dioxin-like congeners) on off-site surface waters, from the Ward Transformer's facility's NPDES outfall to the unnamed tributary to Little Brier Creek (Reaches A, B, and C), Little Brier Creek proper (Reach D), Brier Creek Reservoir, Brier Creek, Lake Crabtree, upper and lower Crabtree Creek, and the Neuse River. Please note that aluminum toxicity is associated with soluble aluminum. Aluminum is identified as a COPC only at sites where the soil pH is less than 5.5 (EPA, 2003. Ecological Soil Screening Level for Aluminum, OSWER Directive 9285.7-60). Low pH levels were not found at this site.*

23. The recent results of clam bioassays by Lehmann (2006) and Lehmann et al. (2007) indicate that current conditions cause reproductive impairment to at least some aquatic species. These

results were apparently not included in the ecological risk assessment, thereby omitting important toxicological information on risks to aquatic animals.

EPA Response: *The documents cited were not available during the planning stages of the BERA and, consequently, are not included. The extent of impairment to the Asiatic clam (Corbicula fluminea) populations in the Crabtree Creek watershed associated with PCB contamination is not known at present. During RI fish sampling efforts, Corbicula shells were observed to be a significant component of the substrate in some areas and shell middens from raccoon foraging were also present. While no quantitative sampling to characterize the macrobenthic invertebrate communities relative to control streams was performed in the RI, the observations indicate that there are viable populations of this species in affected reaches. The extent to which the non-native and invasive Corbicula clam is a good surrogate for evaluating potential impacts to native mollusk species, which are mussels rather than clams, is uncertain.*

24. In addition, risks to wildlife are significantly underestimated based on the way that Toxicity Reference Values (TRVs) were calculated. No safety factors for increased species sensitivity were incorporated into these calculations when the species used in the laboratory were different than the target wildlife species. The report attempts to dismiss the significance of safety factors by erroneously claiming that laboratory species tend to be more sensitive than wildlife species. Such a generalization is not true, particularly for avian receptors. Bald eagles are certainly more sensitive to PCBs than pheasants or chickens. Among mammals, mink are among the most sensitive and are not often used in lab tests.

EPA Response: *Allometric modeling from Sample and Arenal (1999) was used for interspecies extrapolations of the TRVs (i.e., when the test species is different from the wildlife or target receptor species). TRVs are not available for eagles due to their special status; thus, a surrogate species is used for this receptor. TRVs for mink were used in the BERA. Risk to sensitive species is considered by evaluating risks using a no-effect TRV.*

25. The report admittedly underestimates risks from PCBs to raccoons and mink by ignoring some pathways such as oysters and mussels. A study was originally planned to characterize mussel tissues but was cancelled. Given the amount of sediment that bivalves take up, it is likely that they are a significant pathway for PCB uptake to their predators. It is encouraging to see the RI openly admit this flaw in their design, but unfortunately these omissions simply compound the flaws noted above.

EPA Response: *The BERA used the fish wholebody tissue concentrations to evaluate risk to mink and crayfish whole body tissue concentrations to evaluate risk to raccoons. The uncertainty analysis discusses that because tissue concentrations of all prey species consumed by the raccoon and mink were not characterized, it is not known whether dietary exposure results in lower or higher risks than those based on fish and crayfish ingestion. Comparisons of crayfish concentration data with fish tissue concentration data from the sampling reaches where both were collected indicated that fish tissue concentrations were higher than crayfish tissue. Thus, it is likely that fish tissue concentrations would be*

higher than mollusk concentrations, and the resulting dietary exposure may over-estimate risk.

While there may be mussels in the watershed, oysters would not occur in this watershed prior to estuarine conditions near the mouth of the Neuse River.

26. Despite the fact that Lake Crabtree currently has fish advisories in place based on the concentration of PCBs and dioxins found in fish tissues, the BERA found no risks to fish and crayfish at the Lowest Observed Effect Dose (LOED). Besides the obvious problem with combining toxicity data for two species of completely different phylogenetic groups, this finding contradicts all available evidence. The body burdens reported in the RI could be high enough to cause reproductive problems in sensitive fish and developmental problems in fish fry (Rice et al 2003). Both of these endpoints are critical to the ongoing health and survival of fish populations, and neither appears to have been considered.

EPA Response: To evaluate the risks to fish and crayfish, tissue residues were compared to tissue residues presented in the USACE/EPA (2004) Environmental Residue-Effects Database (ERED), which is a compilation of data, taken from the literature, where biological effects (e.g., reduced survival, growth, etc.) and tissue contaminant concentrations were simultaneously measured in the same organism. This database was searched for PCB and dioxin effects on fish and aquatic invertebrates, focusing on effects concentrations in whole body samples and focusing on effects on reproduction, growth, and survival. A NOED and a LOED was selected for each receptor group (i.e., omnivorous fish, carnivorous fish, and aquatic invertebrates). The Rice et al 2003 study was not listed in the ERED database.

Also of note is that fish communities in the reaches sampled including the reservoirs do not appear to reflect impacts associated with contaminant toxicity. While fish sampling in the Remedial Investigation targeted specific fish species for chemical analyses, presence of additional non-target species indicates that the stream sections and the reservoirs support reasonably diverse communities and adequate abundance. Few DELTs (deformities, erosion, lesions or tumors) were observed in fish prepared for analyses. The principal threat to the fish community appears to be rapid commercial development in the Crabtree Creek watershed and the attendant changes to the hydrology. Flashy conditions have lead to moderate to heavy bank erosion and the resultant habitat loss or impairment, higher turbidity, and siltation. These are significant stressors to fish and macrobenthic invertebrate communities.

27. In addition to the above, there are a number of other issues with the BERA: Bald eagles were not examined in all reaches, a gap in crayfish sampling resulted in the omission of risk assessments in one reach, the use of maximum detected values when 95% upper confidence limits were exceeded, and the assumption that mink and bald eagles do not accidentally ingest soils or sediments. All of the above issues, though small in comparison to others, result in the underestimation of risks to wildlife. Any one of these issues could potentially be enough to make the difference between a target species exceeding acceptable risk levels. Serious flaws

such as these and others noted above represent serious issues that should be considered when determining the acceptability of the proposed Superfund plan.

EPA Response: *Bald eagles were evaluated as a piscivorous avian receptor of concern in reaches providing the appropriate foraging habitat. Because bald eagles are unlikely to forage in stream reaches with closed canopies, that habitat was evaluated using the great blue heron as the piscivorous avian receptor.*

No crayfish samples were collected from Brier Creek Reservoir or Lake Crabtree, so raccoons as a target receptor group that ingests aquatic invertebrates were not evaluated. Rather, the primary mammalian receptor of interest for the open waters downstream of the Site was the mink. Comparisons of crayfish concentration data with fish tissue concentration data from the sampling reaches where both were collected indicated that fish tissue concentrations were higher than crayfish tissue. Consequently, evaluating risks to a fish-consuming mammal (i.e., mink) would likely result in over-estimated risk to a crayfish-consuming mammal (i.e., raccoon)..

The use of the maximum concentration as the exposure point concentration for data sets where the 95% UCL is greater than the maximum is a common convention for small data sets. The 95% UCL on the mean is used in risk assessment as the representative average concentration within an exposure area. It is inappropriate to use a statistical estimate of the average concentration that is greater than the maximum concentration in a dataset.

Incidental sediment ingestion rates for mink and bald eagles are negligible. One percent of the dry tissue ingestion rate was assumed in calculating contaminant intake for these species.

Comments on the Feasibility Study

28. The Feasibility Study (FS) is substantially lacking compared to the Remedial Investigation (RI). Some of these shortcomings are a direct result of inaccuracies in both the ecological and human health risk assessments. However, these flaws are insignificant compared to one supremely flawed assumption in the FS regarding Reach A, just downstream from the Ward Site.

Reach A is defined as the unnamed tributary to Brier Creek directly adjacent to the Ward Transformer property. This Reach contains the highest concentrations of PCBs of any of the water bodies in Operable Unit 1 (OU1). Though this Reach was investigated under the RI for OU1, remedial options for this area will be selected and performed under the cleanup for OU0, the Ward Transformer property itself. Though odd, there is nothing wrong with this approach in practice if handled properly. However, one passage in Section 4.1.1 indicates that the cleanup of this Reach is being approached in a manner that is not consistent with the protection of downstream locations:

“The drainage area around the Ward Transformer property is approximately 120 acres, and Reach A is a tiny tributary (2 feet wide and less than 1 foot deep) to Little Brier Creek. As a

result, the contaminated sediment loading from soil and sediment erosion around the Ward Transformer Site is relatively small compared to the uncontaminated sediment loading from other segments of the Little Brier Creek watershed (5200 acres) and downstream watersheds (e.g., Brier Creek). The practical result of this mixing of relatively small amounts of contaminated sediments with larger amounts of uncontaminated sediments is that the PCB contamination from Ward Transformer is diluted by these "clean" sediments. This form of natural recovery is occurring, as evidenced by the drop in PCB concentrations in downstream sediments as each new stream with uncontaminated sediments empties into Little Brier Creek and Crabtree Creek."

There are a number of problems with the concept in this paragraph. The first problem is the disturbing failure to incorporate accurate scientific information regarding the nature of PCBs and their fate in the environment. Because PCBs are so persistent in the environment (they can remain for hundreds of years under some conditions), the "dilution" of these sediments with "clean" sediments downstream is irrelevant. The fact that over time the contamination in these sediments has made its way all the way down to Crabtree Lake to deposit in concentrations high enough to justify fish consumption advisories for PCBs is evidence that dilution does not play a significant role in the long term compared to other factors. The above approach addresses the contamination in an outdated "dilution is the solution to pollution" mindset, and assumes that all Reaches of OU1 were contaminated at the same time.

EPA Response: Reach A is not included within OU-1. Reach A is being addressed separately under the on-going Time- Critical Removal Action, which is appropriate, due to its proximity to the Ward Transformer facility and the higher levels of detected PCB concentrations.

The EPA is describing a natural surface water and sediment process that helps explain the distribution of PCBs in the watershed. The EPA is well aware of the long term persistence of PCBs in the environment. The remediation of the PCB contamination at the Ward Transformer facility, Reach A, Reach B, Reach C, Reach D and lower Brier Creek will help reduce the amount of PCBs moving downstream to levels which will support MNR and eventually help reduce sediment PCB concentrations within the biologically active zone in Brier Creek Reservoir and Lake Crabtree to levels which will support the reduction of PCB concentrations in fish and other aquatic biota. The EPA clearly presents its conceptual model of PCB fate and transport in the RI and it does not assume that the downstream reaches were contaminated at the same time, but rather over many years.

The sedimentation rates in the Brier Creek Reservoir and Lake Crabtree are significant. Since construction of the dams forming these impoundments, sediment depths have increased considerably. Source control in the form of the on-going removal action and the proposed action for OU1 will remove contaminated soil and sediment and will result in cleaner sediments entering these impoundments and, by mixing and burial, will become over time not bioavailable to the macrobenthic invertebrate, fish and higher trophic level receptors, including humans.

Regardless of the extent of removal of the primary source (Removal Action areas) and secondary source (OU-1 stream sections with >1 ppm PCB removal), this is not just a dilution-based mechanism, rather a hydrologic process that will continue to occur in this watershed.

29. The concept that “dilution is the solution to pollution” has been applied in the Clean Water Act for decades and is based on the chemical, physical and biological interactions of “conventional” pollutants in water. “Conventional” pollutants are nutrients (nitrates and phosphates), bacteria, heat, acidity, sediment and organic matter (carbon material from the breakdown of plant and animal matter). In the case of these pollutants, estimates of allowable releases assume that degradation, breakdown, biological absorption and/or other natural processes cause reductions in the amount of the pollutant in the water body. In other words, these pollutants are not conserved, but are processed in a way to be removed from the system. Sediment is the exception; the assumption is that sediment is a natural part of the benthos and can be incorporated into the benthos upon settling. PCB’s and other persistent organic pollutants do not have the properties that permit degradation, breakdown, transformation or other removal from the system in appreciable levels. PCB’s are conserved and persist in the aquatic environment, hence the assumptions necessary to apply the “dilution” approach are simply not met.

Furthermore, the impacts of conventional pollutants are short term from a toxicological extent. These conventional pollutants cause fairly rapid impacts to the system in the area of the release. Not so with PCB’s and other persistent organic pollutants. PCB’s exert their effects over long periods for as long as they remain in the system and subject to uptake by biological receptors. PCB’s have no short term (i.e. acute) effects at the concentrations found in aquatic systems at contaminated sites.

An examination of the basic properties of small (low order) streams completely discredits this assumption when combined with the fact that PCBs are incredibly persistent in the environment. Streams are dynamic environments with a wide variety of flow regimes both temporally and spatially. Sediments will be deposited in some areas with lower water velocities that may change depending on the current discharge rate of the stream. During periods of higher than average discharge, these deposition patterns can change significantly. Areas that at one time were depositional can be subject to water velocities that scour and move sediments downstream. Flash flood events (common in these small order streams) interact with floodplain soils, depositing or transporting soils from these areas in unpredictable fashion. The assumption that sediment loadings can be accurately estimated from drainage areas is also scientifically unsound. The statistics cited in the text apply only to water discharges and not sediment. Sediment transport is a factor of many variables, including water velocity, sediment particle size, and land use that are not addressed in either the RI or the FS.

EPA Response: EPA agrees that flash flood events are one of the primary mechanisms for the downstream migration of PCBs in sediment, as stated in the RI.

Because of the flashy nature of the sediment loading and the lack of data for sediment loading during flash flood events, EPA's sediment loading calculations employed a GIS-based model (PLOAD) to estimate annual averages for sediment and PCB loading. The model takes into account land use in the watershed, which is addressed in both the RI and FS. EPA understands the complexity of determining sediment transport loading under widely varying flow conditions. EPA purposely utilized conservative model inputs to provide conservative sediment and PCB loading estimates and calibrated the results against the measured sediment thickness in Brier Creek Reservoir and Lake Crabtree.

30. Another major problem with the quoted passage is that decreasing PCB concentrations in sediments further from the site are not evidence of any sort of "recovery." These reductions are a function of distance from the Ward Transformer site and *the time that these contaminated sediments have had to travel downstream*. In no way, shape, or form should these lower concentrations be construed as "recovery," as the contamination in these downstream areas is likely composed of sediments originally contaminated in Reach A when Ward Transformer first began to process PCB contaminated transformers in the 1960's. Properly cleaning up the waterways downstream from Ward Transformer requires the basic understanding of these facts. Unfortunately, it appears the approach demonstrated in the quoted passage is applied to the rest of the FS as well.

EPA Response: The decreasing PCB concentrations have little to do with the time that the sediments have had to travel downstream. The decreasing PCB concentrations are related to distance from the site and the mixing of contaminated sediments (originating from the Ward site) with uncontaminated sediments from multiple streams and creeks emptying into the creeks, reservoir and lake below the site. As pointed out earlier in these comments, flash floods can carry sediments.

31. Another major problem with the plan to let the downstream waters "recover naturally" is that the reservoir and the lake will have to be dredged one day to prevent sediment from filling in each water body. When the dredging is conducted, the buried PCB-laden sediments will be uncovered, resuspended and once again serve as a contaminant to the aquatic system. A more complete description of MNR and its effectiveness can be found in the attachment "Monitored Natural Recovery in Aquatic Systems".

EPA Response: See response to comment number 36 below.

32. As previously noted in comments on the RI, there is a significant dearth of data on floodplain soils around the various reaches. Perhaps related to this, there is no proposed remedy for floodplain soils within the FS. Data have shown that at least portions of these stream banks exceed the remedial goal of 1 ppm of PCBs. It is critical to clean up these areas as they serve of both sources and sinks for PCBs in and out of the waterways. A failure to act in these areas will only result in the continued addition of PCBs to sediments downstream.

EPA Response: EPA agrees that floodplain soils require further evaluation prior to remediation and responded to this issue earlier. See response to comment number 10.

33. The FS evaluates in a number of different alternatives using “monitored natural recovery” (MNR) as a remedial option. MNR is essentially the act of doing nothing and watching nothing happen. The Feasibility Study notes the lack of long-term data on MNR, and this observation is exactly right. Past experiences with MNR on the James River, Virginia have shown that even as overall sediment concentrations of the toxin Kepone decreased with new deposition over time, Kepone concentrations in fish have remained steady at levels high enough to warrant continued fish consumption advisories more than thirty years after the toxin was originally dumped into the watershed. The Hudson River (NY) offers another example of MNR’s poor record. After more than 25 years following the decision to do nothing, the contaminated sediments have to be removed from the river because fish tissue PCB levels remain unacceptable with insufficient decline for the foreseeable future. Newark Bay and the Passaic River in New Jersey are additional places where PCB’s, dioxins and pesticides from the 1960’s are still present and causing problems. The buried sediments from decades ago are still presenting risks to human health and the environment. This alternative is better described as “No Action with Monitoring.”

EPA Response: The removal and treatment of PCB contaminated soil and sediment is currently ongoing at the Ward Transformer facility and Reach A. EPA is proposing sediment and floodplain soil removal actions in Reaches B, C and D plus lower Brier Creek. This combination of active remediation of the contaminant source areas together with MNR in Brier Creek Reservoir, Lake Crabtree and lower Crabtree Creek is more than “no action with monitoring.” MNR is an accepted remedial technology that EPA considers appropriate for the conditions found in OU-1. The examples quoted for sites with much higher contaminant concentrations, river environments and/or limited contaminant source controls are not comparable to the conditions in Brier Creek Reservoir and Lake Crabtree.

The PCB concentrations detected in some areas of the Hudson River sediments are 100 to 10,000 times higher than the highest sediment concentrations detected in Brier Creek Reservoir and Lake Crabtree (Data Summary Report for Candidate Phase 1 Areas - Hudson River, GE, 2004). The river environments mentioned in the comment (including the Hudson River) are dynamic and some buried sediments containing contaminants are likely to be disturbed during high flow events. Therefore, EPA believes that the listed examples are not appropriate comparisons to the conditions found in Brier Creek Reservoir and Lake Crabtree.

34. Sediment sampling in Brier Creek Reservoir and Lake Crabtree detected low PCB concentrations, seemingly less than action levels, but PCB concentrations in aquatic biota are high enough to present risks to both human and wildlife: The PCBs have to be entering the food chain from somewhere, and the most likely place is sediments in the two water bodies. Sediment sampling in these two water bodies was relatively sparse (particularly in Brier Creek Reservoir), and did not look at deep enough sediments in many locations. “Hot spots” of contamination can have significant effects on biota, and need to be identified. Previous sampling efforts have obviously missed something, and need to be revisited. It is unclear if major depositional areas at the mouth of Brier Creek leading into the Reservoir were sampled, but these areas could be a potential source of PCBs for wildlife in the Reservoir and points downstream.

EPA Response: *Local area of Reaches B, C and D may contain higher concentrations of contaminants ("hot spots"), but these "hot spots" should be identified during the pre-excavation sampling program component of the Selected Remedy. Contamination "hot spots" are unlikely in the lake and reservoir, due to the mechanisms that determine the spread and deposition of fine sediments (containing sorbed PCBs) across the water bodies. Two areas where higher contaminant concentrations might be anticipated are the locations where the creeks empty into the reservoir and lake. Sediment samples collected in these areas showed slightly higher PCB concentrations, but not concentrations which would be considered "hot spots." Additional sampling in Lake Crabtree and Brier Creek reservoir will be conducted as part of the MNR component of the Selected Remedy. This sampling program will evaluate the effectiveness of the MNR part of the remedy and will help verify the distribution of PCBs across Lake Crabtree and Brier Creek Reservoir. Section 13 of the ROD documents the components of the Selected Remedy.*

Given the nature of the sediment-mediated transport and deposition of PCBs in the reservoirs, it is difficult to envision a mechanism that would result in the formation of "hot spots" in the reservoirs. PCB concentrations in deeper sediments below the maximum depth of bioturbation have little relevance to biota.

35. The natural recovery (MNR) alternative has been offered as the preferred remedy in Brier Creek Reservoir, Crabtree Lake, and Crabtree Creek in combination with institutional controls (fish consumption advisories) that are already in place. Again, this alternative is not a substantive change from the status quo. Fish tissues would have to continue to be monitored because of the advisory. The only change is that monitoring and review will occur more often. This action is not protective of human health because it allows for continued long-term risks related to the primary risk driver to humans over the entire site- fish consumption. This approach also does not address risks to ecological receptors. The Bald Eagles nesting near Lake Crabtree cannot not read warning signs and do not count how many meals of fish a month they have eaten from these water bodies.

EPA Response: *Not only will the monitoring of fish tissue concentrations be more frequent than they would under a state program intended to re-evaluate consumption advisories, but the tissue data and co-located sediment data that will be collected at yearly intervals will be used to determine the extent to which the remediation goals are attained as part of the CERCLA 5-year review process. EPA recognizes that institutional controls such as fish consumption advisories have no bearing on ecological risk. However, this does not invalidate the MNR alternative. As previously stated, MNR is intended to reduce fish tissue concentrations and, to the extent that this is achieved by primary and secondary source removal in the upgradient streams and the sequestration of contaminated sediments by mixing and burial, risk to all piscivorous fauna will be reduced.*

36. Both Crabtree Lake and Brier Creek Reservoir are used recreationally by virtue of proximity to the population, even if they were originally intended for flood control. The consequence of the recreational uses is that human and ecological uses and health must be protected for the entire system, from the Ward Site proper to Crabtree Creek, below the lake. In order to

maintain the lake and reservoir as open water bodies that can fulfill their role in flood control, each will have to be dredged to remove the accumulated sediment, and maintain depth.

Therefore, the proposed plan must account for:

1. continued recreational use,
2. protection of stable and viable populations of indigenous plants and animals in the waters and nearby terrestrial areas, and
3. dredging to maintain the water bodies as open waters.

The Feasibility Study and the Proposed Plan does not account for these factors. In particular, the effect of the accumulation of sediment in Brier Creek Reservoir and Crabtree Lake on their ability to control flood events is overlooked. The preferred alternative would effectively bar future dredging operations indefinitely. The EPA needs to evaluate whether the minimal long-term gains provided by MNR are outweighed by the risks of degrading the two water bodies' ability to perform their original function.

EPA Response: *EPA anticipates no restrictions on the recreational use of Lake Crabtree for boating, swimming, field sports, running/hiking, or "catch and release" fishing, based on the results of the BHHRA.*

EPA also believes that the Proposed Plan properly balances the need to protect the environment from contaminants against the potential disruption or destruction of aquatic and terrestrial habitats during large-scale excavation-dredging operations in Brier Creek Reservoir and Lake Crabtree.

The potential for future dredging of Brier Creek Reservoir and Lake Crabtree to maintain flood storage capacity is a difficult issue that requires additional study and evaluation by all stakeholders. If dredging is necessary in the future, it can be conducted in accordance with environmental dredging "best practices" to reduce the impact on the aquatic habitats and downstream water bodies.

Future dredging activities in the reservoir(s) would need to be conducted in a manner that would not prevent or delay attainment of the remedial goals in the ROD.

37. One of the major flaws of the FS was the limited scope of the remedial options considered. Because of the small scale of much of the cleanup, it offers an excellent opportunity to evaluate new treatment technologies such as bioremedial techniques like the enhanced microbial decomposition that have been explored by researchers like Bedard et al (2007). The FS also only evaluates dredging the entirety of Brier Creek Reservoir and Crabtree Lake. It is possible that with increased sampling hotspots of contamination could be located, and these limited areas could be dredged at a far reduced cost. The EPA should thoroughly explore these options.

EPA Response: *The Feasibility Study considered multiple technologies and process options, however, bioremedial techniques were not evaluated. The research conducted by*

Dr. Bedard with sediments from the Housatonic River sounds very promising, but it appears that the technology is still in the developmental stage. As noted in earlier comments, PCBs are highly resistant to breakdown by physical, chemical or biological processes. While bench- or pilot-scale testing could be considered, no currently available microbial technology exists with demonstrated suitability for full-scale remediation of lake (or stream) sediments.

When considering treatment technologies for any FS, it is important to evaluate options based on site-specific conditions and the size of the project. For a project such as the Ward Site stream remediation with delicate environmental conditions, treatment options considered must have some proven track record. Furthermore, this is a \$5 million project, which is not a proper circumstance to try new treatment methods such as the one that was mentioned in the comment (Bedard et al, 2007). This particular research was conducted under controlled laboratory conditions using 50-ml vials. This level of proof is absolutely insufficient to consider it as a treatment option for the FS. Even if a non-proven treatment method is included for consideration, it will be screened out due to lack of information on evaluation criteria, such as, implementability, cost, etc.

A vast majority of the tests proven to be successful under laboratory conditions fail under actual site conditions for multiple reasons, and they never elevate to the level of "treatment technology" nor will they ever enter the EPA Innovative Technology Program. For a technology to be considered in any FS, at least a pilot-scale test must have been completed, unless it is a very small site with very little or no environmental impact, in which case, the remediation itself can be used as a pilot-scale study with EPA's approval.

EPA intends to conduct additional sediment sampling in Brier Creek Reservoir and Lake Crabtree as part of the MNR component of the Selected Remedy, however, the identification of sediment "hot spots" is unlikely, because of the reasons identified in EPA Response No. 34.

38. The focus on human health in the FS creates another significant problem. The document makes the assumption that if the human health endpoint is protected, then wildlife receptors will also be protected. Unfortunately, many of the assumptions used in the human health risk assessment such as limited amounts of exposure times are inappropriate for wildlife that spend their entire lives in the exposure area and consuming PCB contaminated biota. CERCLA demands that remedial actions be protective of wildlife, particularly endangered species. The focus on the human health endpoint to the exclusion of all else has resulted in "institutional controls" being a significant component of the preferred alternative. As noted above, since these controls are based on the knowledge and voluntary adherence to fish consumption advisories, they have no bearing on wildlife that cannot make rational decisions regarding diet outside their own instinctual needs. By focusing on human health, the document marginalizes the findings of the Remedial Investigation risk assessments.

EPA Response: Please understand that the EPA cannot remediate contaminated biota. Rather, the FS focuses on the environmental medium that can be remediated, i.e., sediment. The use of institutional controls (i.e., fish consumption advisories) is standard

practice in the implementation of the MNR alternative; thus, it is a significant component of the alternative. Reductions in fish tissue concentrations to the remedial goals that are expected to be achieved under the MNR alternative will result in reduced risk to bald eagles and all other piscivorous receptors. Fish tissue monitoring is included in the MNR alternative, and will include both fillet samples for human health and whole body samples for ecological health. Note that while fish tissue monitoring frequency may be reduced upon attainment of the remedial goals, the recovery process will continue to result in lowering PCB concentrations and provide further reduction in risks to wildlife.

Summary and Recommendations

39. The Proposed Plan is built upon a number of poor assumptions that were carried through from the RI/FS. The one with the most significance to the cleanup of OU1 is that water bodies downstream from the most contaminated areas are recovering. There is absolutely no evidence of this occurring, but this "recovery" was cited in the recommendation of the MNR alternative in Brier Creek Reservoir, Crabtree Lake, and Crabtree Creek. This assumption also allowed Ward Transformer to avoid answering difficult questions regarding the contamination in these areas. Dilution is not the solution to persistent organic pollutants. If sediment concentrations across the two major water bodies were so low, then how are PCB concentrations in fish so high as to require consumption advisories? The failure to sample these reaches more substantially is a major data gap, and additional sampling is required to establish the source of PCBs in these fish.

EPA Response: The PCB concentrations detected in the Brier Creek Reservoir and Lake Crabtree sediments correspond with the PCB concentrations detected in the fish samples, based on the BSAF calculations presented in the Feasibility Study. Additional "hot spots" are not required to explain the RI results. As noted earlier in the responses, the site-specific BSAFs appear to be consistent with those obtained at other PCB sites with low-level contamination of sediments. Were the sediment concentrations an order of magnitude lower than those measured in surface sediment samples and some mechanism present for highly variable contamination, concerns might be raised regarding the existence of un-sampled "hot spots."

40. The assumption in the Feasibility Study that actions protective of human health would also be protective of the environment also affected the recommendations in the Proposed Plan. Dangerous levels of PCBs remain in fish that present a direct risk to endangered wildlife such as Bald Eagles, however the preferred remedial alternative of MNR will do nothing to address these risks. The selection of this alternative in points downstream of Reach D would mean that the proposed plan would not meet all Applicable or Relevant and Appropriate Requirements (ARARs), particularly regarding the protection of endangered species. Voluntary Institutional Controls like fish consumption advisories do not benefit wildlife.

EPA Response: As stated above, reductions in fish tissue concentrations that are expected to be achieved under the MNR component of the Selected Remedy will result in reduced risk to bald eagles and all other piscivorous receptors. While monitoring frequency may be reduced upon attainment of the remedial goals, the process will continue to result in lowering PCB concentrations and provide further reduction in risks to wildlife.

41. Even if the Proposed Plan did not make these assumptions, it would still be unacceptable because it lacks any measure of future source control. The plan makes no mention of cleanup activities at OU0 or the need to excavate contaminated soils in the floodplain. Floodplain soils act as both sources and sinks for persistent organic pollutants, and therefore must be addressed. While we understand that remedial actions have already been selected and begun to be implemented at the Ward Transformer property, they must be discussed when evaluating OU1. If the cleanup of OU0 is inadequate, it will affect the cleanup of OU1 as well. Therefore future documents regarding sites downstream of the Ward Transformer property should include discussions of the remedial actions at OU0 as well.

EPA Response: *The cleanup at the Ward Facility and areas upgradient of Reach B are ongoing and progressing well. Clean up levels selected for those areas are consistent with the OU1 Selected Remedy. The issue concerning characterization of floodplain soils in Reaches B, C, and D is valid and EPA has modified Alternative 4 to address this issue by adding floodplain soil sampling to the pre-excavation sampling program. See response to comment number 10.*

42. Based on the above problems, we recommend that the Proposed Plan be modified to provide greater and more immediate protection to wildlife in addition to eliminating all potential sources of PCBs to OU1. This would require that Monitored Natural Recovery (MNR) be dropped as the preferred alternative downstream from Reach D. The wildlife in these areas does not have fifty years or (likely) more to wait for PCBs to degrade to acceptable levels. Instead, Brier Creek Reservoir and Crabtree Lake need to be sampled more thoroughly to identify any hotspots of contamination and locate the source of the PCBs bioaccumulating in fish. The additional sampling proposed in Reaches B, C, and D should also include floodplain soils, and contaminated areas should be excavated. If these areas of contamination are not addressed, it will not matter how thorough the rest of the cleanup is because PCBs will continue to be added to the streams and lakes every time there is a major rain event as sediments are transported from the floodplain downstream.

EPA Response: *The proposed plan was modified to address the concerns about floodplain soils and the protection of ecological receptors. The ROD for the Ward Transformer OU-1 will include these provisions. EPA believes that the MNR component of the Selected Remedy is appropriate.*

B. Responses to Comments submitted by Golder Associates, Inc. on behalf of Consolidation Coal Company

43. EPA has included the reach of Lower Brier Creek (the portion of Brier Creek that extends from the Brier Creek Reservoir to Lake Crabtree) for remedial action on the basis of a maximum detected PCB concentration of 0.28 ppm in the sediment samples, which is well below the EPA's remedial goal of 1.0 ppm PCBs. This level of PCB concentration does not support EPA's decision to include this reach for remedial action.

EPA Response: *A conservative decision was made when EPA decided to include Lower Brier Creek as part of the Alternative 4 remedial action. Only a limited number of samples were collected along Lower Brier Creek. If the results of the additional sampling for Lower Brier Creek are all below the 1.0 ppm remedial goal, no excavation will be needed along Lower Brier Creek.*

44. EPA should clarify whether the remediation is to be focused along the stream itself (e.g., from bank to bank) or whether it would include the many acres of wetlands adjacent to the stream. This could impact the remedial approach.

EPA Response: *Additional floodplain soil sampling will be required as part of the pre-excavation sampling program component of the Selected Remedy. If the soil concentrations are above the 1 ppm remedial goal, these areas will also require excavation. Potential impacts to wetland areas will need to be assessed as part of the Remedial Design.*

45. Would the gravel access roads in each reach be left in place, or covered with backfill soil, to facilitate the yearly MNR sampling for 15 years? Also, would EPA consider leaving the access road between the Brier Creek Reservoir and Lake Crabtree in place to be developed into a nature trail extension from Lake Crabtree Park, pending community and regulatory approval?

EPA Response: *EPA believes that the access roads are temporary and should be removed after the remedial actions are completed. If the access roads are left in place there could be a corresponding loss of floodwater storage volume, which may not be desirable. During the RI multiple sampling rounds along these reaches were conducted without using access roads, so MNR sampling could be conducted without the roads. Final determination regarding this issue will be made during the remedial design stage of the process.*

46. EPA estimates the amount of backfill to be equal to the amount of excavation. Does EPA intend that the stream bottoms be backfilled to replicate the sediment covered bottoms? This would seem illogical since the backfill would, in due course, most likely be transported into the reservoir and/or lake.

EPA Response: *Yes, EPA intends to restore the excavated stream bottom with similar materials to the same topography that existed before excavation. The ecological habitats need to be restored. Prior to implementing the remedial action, a stream and riparian zone restoration work plan will need to be prepared and reviewed by State and Federal agencies. The current bottom topography has been stabilized to its current elevations as a result of years of erosion/accumulation. Altering the bottom topography could lead to excessive erosion at some places and accumulation of sediments at undesirable locations.*

It is inevitable that some of the backfill will be transported downstream over time; however, the lost sediments will be replenished by the incoming upstream sediments, thereby, maintaining the natural balance and topography.

47. A reconnaissance of the OU1 area indicates that many of the trees are valuable, old growth, hardwood. Some of the wooded areas are designated as "Tree Protection Areas". The proposed remedial action would certainly require many such areas to be cleared.

EPA Response: *This is an important consideration that will need to be addressed during the remedial design stage. All remedial actions will be conducted in such a manner that impacts to the environment would be minimized to the extent possible.*

48. It should be expected that the excavated sediment will be too wet for direct landfill disposal, and will need to be drained prior to transport. Can the sediment be stockpiled along the streams with the decanted water drained back into the stream?

EPA Response: *The Feasibility Study planned these activities assuming that prior to removing sediments from the streams, portions of the stream will be blocked off and the flow will be diverted through pipes running parallel to the stream. Therefore, the moisture content in the sediments will be less than if underwater dredging was performed. The actual moisture content of the sediment will depend on the sediment characteristics.*

Excavated sediments could be placed in temporary storage areas where some of the remaining moisture will also evaporate. Any remaining water may be drained back to the stream, in accordance with state requirements after proper treatment (i.e., filtration and/or activated carbon treatment), or transported offsite for disposal. Final determination regarding this issue will be made during the remedial design stage of the process.

49. The FS indicates that mussel surveys are to be conducted to determine if there are threatened/endangered mussel species in those areas to be remediated and that if they are found the "remedial activities may need to be modified to reduce potential adverse impacts to the threatened/endangered species." (FS p. 4-19) What remedial action modification does the EPA contemplate for this situation?

EPA Response: *Sediment removal in specific areas of the creek where threatened/endangered mussels have been identified may or may not be performed, even if the PCB concentrations in the sediment exceed 1 ppm. Also, excavation work will need to be conducted in such a manner as to avoid burial of the mussels with sediments released during excavation and/or the drying out of the stream segments where threatened/endangered mussels have been identified.*

50. The FS states (p. 4-21) that "There could be adverse impacts to the stream habitats due to stream excavation activities, especially for benthic and other aquatic organisms." Given that the goal of the remedial action is, in fact, to remove the stream sediment, it would seem that EPA should acknowledge that the habitat in question would be completely destroyed and should comment on other impacts that such destruction might have.

EPA Response: *The habitat will be destroyed in areas where sediment excavation is conducted, but by restoring the stream bed these communities should be able to reestablish themselves. Only portions of the creek bed are expected to be disturbed, so the habitats that*

are destroyed should be repopulated relatively quickly by recolonization from nearby and upstream sources.

51. The FS notes that sediment distribution along the stream reaches is dynamic and that sampling to determine the need for remediation of specific areas should be accomplished as part of the remediation. EPA is not clear on whether such sampling should be done prior to beginning remediation or contemporaneously with the remediation. EPA should clarify this because it would impact the approach.

EPA Response: *Details of the pre-excavation sampling program will be worked out as part of the Remedial Design. EPA anticipates that the pre-excavation sampling program will be implemented just prior to the start of remedial activities. Additional verification sampling will need to be conducted contemporaneously with the remediation.*

52. Would sediment sampling have to be repeated after excavation to verify that any remaining sediment is at a concentration less than 1 ppm?

EPA Response: *Yes, EPA anticipates the need for verification sampling.*

53. Would the PCB analyses have to be done by laboratory methods or could immunoassay methods be used?

EPA Response: *EPA may consider the use of PCB immunoassay methods for the pre-remediation and verification sampling. A sufficient number of duplicate samples would need to be collected and analyzed at off-site laboratories to support the PCB immunoassay results.*

54. The FS appears to underestimate the number of samples to determine whether a segment of a reach requires remediation. The FS (p. 4-16) indicates that sediment samples for PCB analysis would be taken along transects that are spaced 50 feet apart along Reaches B, C and D and 100 feet apart along Lower Brier Creek, with three samples taken per transect. The EPA's estimate (FS Table B-4) provides for 800 samples, while using the spacing provided in the text, it is estimated that 1,071 samples would be required. If samples are taken at multiple depths, then this estimate could double to 2,142 samples. If post-remediation verification samples are also required, the number of samples would be even higher. EPA should clarify its sampling strategy.

EPA Response: *The 800 sample estimate was based on 30 transects in Reach B, 42 transects in Reach C, 84 transects in Reach D and 95 transects in lower Brier Creek. Each transect included 3 locations with one sample collected at each location for a total of 753 samples.*

Due to public comments, EPA intends to increase the number of pre-remediation samples collected to cover an additional depth interval and floodplain soil samples. The additional samples will increase the number of pre-remediation samples to approximately 1600 samples.

Post-remediation verification sampling was considered in the cost estimate of the Selected Remedy.

55. The FS indicates that a temporary gravel access road will be needed to accomplish the remediation, but appears to have underestimated the difficulty and impact of access to accomplish the remediation. Because of the limited number of entrance/exit locations along the reaches and the amount and size of equipment needed for remediation, the temporary access road would likely destroy larger areas of forest and wetlands than EPA appears to have estimated. It appears that the restoration acreage included in the FS Table B-4 is only enough for stream restoration and does not include access area restoration. Golder's estimate of the combined stream and access restoration areas is more than three times greater than EPA's allotted restoration area. Reach B is the most accessible, potentially from the north end (shopping/commercial area), south end (Lumley Road), and possibly from areas along the west side of the reach (shopping area). Access to Reach C is likely limited to the north end, from Lumley Road. Access to Reach D would be from the southern end, from Globe Road or private properties just off of Globe Road. Access to the upper end of Lower Brier Creek could be from Airport Road or the Reservoir Dam area, but access to the lower end (south of I-40) is likely limited to a few commercial properties. Because of access restriction, even though only part of a reach might require remediation, even a very small part, the access road will have to be constructed along the full length of the reach, especially if sampling is done contemporaneously with remediation. If sampling is done prior to remediation, there may be reaches where the access road would be less than full length depending on the location of the specific segment to be remediated. The equipment that would need to be used in the remediation will have large turning radii and even a single lane access road would likely have to be about 20 feet wide with enlarged areas for turnaround, pull-off and equipment staging.

EPA Response: During the costing, it has been assumed that the access roads are constructed along the entire length of the stream. The details such as entry points, width of the roads can be incorporated during the detailed remedial design. During the detailed remedial design, there is provision to make justifiable modifications within reason, in consultation with an approval from EPA.

56. The ability to temporarily divert stream flow during the remedial action appears to be understated. The volume of water for a 2-year storm event (3.7 inches of rainfall in a 24-hour period) would range from about 170,000 gallons per minute (gpm) to 0.75 million gpm for individual reaches. The 25-year event (6.6 inches of rainfall in a 24-hour period) would range from about 0.5 million gpm to over 2 million gpm. To divert a 2-year or 5-year event within a reach would, by itself, involve relatively major construction and require even more land to be disturbed than included in EPA's estimate (see comment 13). Given the description in the FS in comparison to these flows, it appears that EPA has presumed that only low flows could be reasonably diverted and that the remedial action construction would be halted during all but small rainfall events. If so, temporary standby or partial demobilization of the contractor should be expected. Is this what EPA anticipates?

EPA Response: *The duration of the stream restoration alternative should only be 3 to 5 months. It can easily be scheduled during the months with lowest precipitation.*

If storm events occur during remediation, most of the extra water will overflow and flood the wetland areas. It is impossible to perform any remediation activities under these conditions. Therefore, diversion will not be an issue. In the event that a 2-yr storm occurs during the remedial activities, work will be immediately suspended until conditions revert back to normal. A judgment call can be made at that point whether a temporary demobilization is necessary. This is how storm events have been handled during the contaminated sediment removal actions conducted at other Sites.

**C. Responses to Comments submitted by Wake County Board of Commissioners
Brier Creek Reservoir Sampling**

57. The sampling conducted to define extent of horizontal and vertical impacts in the Brier Creek Reservoir may be inadequate to justify the current remedy.

The USEPA's preferred plan is to remediate lower Brier Creek, but not Brier Creek Reservoir, which is upstream of the creek. Wake County does not believe that a sufficient number of samples have been collected in the Brier Creek Reservoir (where only six samples were collected) to conclude that no removal of sediments is needed. Wake County requests that additional sampling and laboratory analyses be conducted in Brier Creek Reservoir to better define the vertical and horizontal extent of PCB contamination in the reservoir.

EPA Response: *EPA believes that the data collected during the multiple phases of the remedial investigation is adequate to justify the Selected Remedy. A conservative decision was made when EPA decided to include sediment excavation along Lower Brier Creek as part of the proposed alternative. The Selected Remedy requires additional sampling along Lower Brier Creek prior to any excavation activities. Excavation along Lower Brier Creek will be required only if results from the pre-excavation sampling program show PCB concentrations in sediment and floodplain soil above 1 ppm.*

The Selected Remedy includes a MNA component. As part of this monitoring program, samples from Brier Creek Reservoir will be collected to support the MNA component of the remedy..

58. A Backup Remedial Plan is needed if Monitored Natural Recovery is ineffective
Wake County is concerned about the long-term effectiveness of Monitored Natural Recovery as a remedy for a large portion of Operable Unit-1.

Wake County is concerned that remedial goals *will* be not *be* achieved through MNR in the proposed timeframe. It is important that Wake County continue to receive data regarding the effectiveness of the proposed remediation plan. We therefore request that the USEPA provide a schedule indicating the timeframe it will use to monitor the effectiveness of the proposed remediation plan and develop a plan for additional remedial measures in the event that MNR proves ineffective. The proposed plan should not be allowed to proceed indefinitely if its

effectiveness is limited and PCBs continue to present a health and environmental risk to Wake County citizens. We propose that the PRPs provide a monitoring program, at no cost to Wake County, for sediment, water quality and aquatic species. The geographic extent of the monitoring program should include locations in the lakes, locations upstream of the lakes (control stations), and locations downstream of the lakes (migration stations). If the remediation plan is not successful in reducing the health risks, as indicated by the monitoring data, additional measures should be implemented, at no cost to Wake County, to address the impacts to these watersheds. In the event that the sampling shows that MNR is not effective, the USEPA should agree to modify the remedy.

EPA Response: *As part of the Remedial Design, a monitoring program plan will be developed. The monitoring program plan will discuss sample locations, media and frequency. The monitoring program plan will be made available to Wake County and its citizens.*

As required under the Superfund program, five years after construction completion of the remedy, and every five years thereafter, remedy reviews will be conducted. As part of these reviews, EPA will evaluate the remedy to ensure it continues to be protective of human health and the environment. In addition, a technical assessment of the remedy will be conducted to determine if the remedy continues to function as intended by the decision documents. If these evaluations show that the remedy is not protective or not performing as expected, additional response actions could be recommended.

59. The O&M of the Flood Control Structures will be more costly

Wake County's required maintenance of the flood-control structures may involve the contact with and potential generation of impacted sediments. The alternative chosen by the USEPA may cause Wake County to commit resources and fiscal obligations that it believes should be borne by the Potentially Responsible Parties (PRP's).

Wake County owns, operates and maintains the flood control structures associated with Brier Creek Reservoir and Lake Crabtree. Future maintenance of these structures will likely involve contact with contaminated sediments and potentially the removal of contaminated sediments from these reservoirs. It is not clear whether or not the USEPA contemplated these activities in the development of its Remedial Action Plan for OU-1. However, it is clear to Wake County that the cost of conducting maintenance, inspection, rehabilitation and replacement activities for the flood control structures will increase if disturbance of the contaminated soils require specialized worker health and safety protective measures, or if the disturbed or dredged sediments are classified as a hazardous material.

Wake County believes that the additional costs to implement measures to address the handling and disposal of contaminated sediments should not be borne by Wake County. We request that the PRP's establish a fund, bond, or line-of-credit to address the incremental costs incurred by Wake County relative to HAZWOPER training and personal protective equipment, sampling and laboratory analyses for sediment characterization, and potentially the management and disposal of contaminated sediments should dredging be required in

either Brier Creek Reservoir or Lake Crabtree for flood control structure maintenance, inspection, rehabilitation and replacement activities.

EPA Response: *The potential for future dredging of Brier Creek Reservoir and Lake Crabtree to maintain flood storage capacity is a difficult issue that requires additional study and evaluation by all stakeholders. EPA agrees that any future dredging of these reservoir(s) may involve disturbance of potentially contaminated sediment. Dealing with contaminated sediments when dredging these types of reservoirs is common, because they are likely to collect contamination from a variety of urban and industrial sources within the watershed. If dredging is necessary in the future, it could be conducted in accordance with environmental dredging "best practices" to reduce the impact on the aquatic habitats and downstream water bodies. Coordination between the appropriate stakeholders would be necessary to ensure that future dredging activities in the reservoir(s) are conducted in accordance with the appropriate regulations*

At this time, and based on the available information, EPA does not believe adequate justification exist for establishing a funding mechanism to address the potential incremental costs that Wake County may incur relative to HAZWOPER training and personal protective equipment, sampling and laboratory analyses for sediment characterization, and potentially the management and disposal of contaminated sediments should dredging be required in either Brier Creek Reservoir or Lake Crabtree for flood control structure maintenance, inspection, rehabilitation and replacement activities. Contaminated sediments from a variety of urban and industrial sources within the watershed is expected to accumulate in structures like this, and should dredging be performed, Wake County may incur these costs due to contamination from a variety of other sources within the watershed. In addition, due to the relatively low PCB levels detected in sediments from these reservoirs it is not clear at this time what additional cost, if any, Wake County may incur.

60. Funding is needed for supporting the State's restrictions on fish consumption

Wake County continues to incur costs to enforce the State's restrictions on fish consumption and should be compensated for this work. The USEPA is relying on MNR to address impacted sediments in Brier Creek Reservoir and Lake Crabtree (clean sediment deposited over contaminated sediment over time). However, fish contamination is the primary concern relative to human health exposure and impacts on the ecosystem continuing even at low levels of sediment contamination. This is evidenced by State fish consumption advisories extending to the Neuse River. The County will be burdened for many years to monitor fishing activities in these watersheds to minimize the exposure of contaminated fish to the public in order to comply with the State's restrictions on fish consumption. Funding should be provided to Wake County annually for the production, placement, rehabilitation, maintenance and replacement of postings and signs, and other public notification requirements.

EPA Response: *EPA appreciates the effort and support provided by Wake County officials on this project, and their commitment to monitor fishing activities in these watersheds to minimize the exposure of contaminated fish to the public in order to protect Wake County's*

citizens. The Selected Remedy includes components to continue or enhance existing North Carolina fish consumption advisories and signs, and to develop and implement educational and community outreach programs. As part of the remedial design, an implementation plan to comply with these two components of the remedy will be developed. Coordination between the appropriate stakeholders would be necessary to develop this plan. The plan will define the goals, roles, duties and responsibilities of the parties involved and the means used to achieve the intended goals.

61. Response Planning is needed for Postulated Natural Disasters

Response Planning is needed for postulated natural disasters. Wake County lies in an area of the southeastern United States that is prone to severe weather events, including severe thunderstorms, tornadoes and hurricanes resulting in significant rainfall and excessive winds. The County is concerned that a significant storm event could cause the potential release of contaminated sediments to downstream locations, an event for which the County is unprepared to mitigate. We request that the USEPA prepare an Emergency Response Plan to address how the County might respond to the sudden release of contaminated sediments to downstream locations in the event of a natural disaster.

EPA Response: *EPA together with the appropriate federal and State entities could assist Wake County in developing the appropriate plan to address how the County might respond to a potential and sudden release of contaminated sediments in the event of a natural disaster.*

D. Responses to Comments submitted by The Raleigh-Durham Airport Authority ("Authority")

62. After careful review of the Plan, it is the opinion of the Authority that the Plan's "SUMMARY OF THE PREFERRED ALTERNATIVE", which lists the preferred alternative as being Alternative 4, represents the best approach for remediating the PCB contamination.

Since much of the investigation and subsequent work related to Operable Unit I is on or adjacent Authority property the Authority requests joint review and update, as necessary, of Access and/or Entry Authorization Agreement documents regarding study/investigation and construction access, to include means and methods of remediation and other work, prior to either such activity being initiated. These aforementioned documents specify the responsibilities and requirements of all parties involved in past and current investigation and/or remediation activity. While these previous Agreements are relevant to past and ongoing activity at the Ward Site and Reach A they may not present a complete and viable description of requirements and responsibilities for work anticipated for Operable Unit I.

EPA Response: *EPA appreciates the Raleigh-Durham Airport Authority comment supporting the Selected Remedy.*

EPA agrees with the Raleigh-Durham Airport Authority regarding the need to update existing and/or obtain a new access agreement, so that the agreement reflects the

requirements and responsibilities for work anticipated to be conducted on airport property as part of the selected remedy for Operable Unit 1.

E. Responses to Comments submitted by The North Carolina Wildlife Federation (NCWF)

63. The North Carolina Wildlife Federation is a non-governmental organization with the mission of "being the leading advocate for all North Carolina wildlife and its habitat". The organization was founded in 1945 and is the state affiliate to the National Wildlife Federation. We number over 50,000 members, supporters and affiliate club constituents across the state.

NCWF and its supporters recognize the relationship of healthy habitats and the opportunities these places afford outdoor recreation activities including, but not limited to, hunting, fishing, birding and paddling.

Upon review of the Superfund Proposed Plan for the impending clean up of the polychlorinated biphenyls (PCBs) — contaminated soils and sediment, NCWF concurs with EPA and North Carolina Department of Environment and Natural Resources (NCDENR) that of the remediation alternatives under consideration, alternative 4 is the preferred alternative.

The comparative analysis of the alternative is thorough in its evaluation of the criteria used for Superfund project feasibility studies. Alternatives 1, 2, and 3 are not sufficient for the criteria of overall protection of human health and the environment nor short-term effectiveness. In addition, all *the* pro-active components of those alternatives are included in the other two alternatives.

In comparison of Alternative 4 and 5, the difference is that Alternative 5 would include either dredging or excavating the sediments in Briar Creek Reservoir and Lake Crabtree with the understanding that this would be a total, in full removal project.

NCWF is concerned with the complexity, duration, and habitat impacts that are associated with Alternative 5.

As the Comparative Analysis points out, the large scale sediment removal project called for in Alternative 5 could have far reaching negative impacts on benthic and other aquatic biota in the habitats in the reservoir and lake. NCWF is also concerned with impacts said project may have on documented Bald Eagle populations within the ecosystem in question. A further concern NCWF has is on the potential removal of present woody debris. A variety of aquatic species depends on natural accumulations of trees, branches, and root wads, which comprises woody debris, as this is the biological keystone of any river or lake system. No alternative that would allow removal of woody debris from the reservoir and lake is acceptable to NCWF, and NCWF is concerned that Alternative 5 would compromise any present woody debris.

The timeframe comparisons between Alternatives 4 and 5 are considerably different. Due to the complexity of the large scale removal components of Alternative 5 including planning, designing and implementation, the project duration will be significantly longer than for the

excavation and off-site disposal efforts outlined in alternative 4.

The longer time period would also mean that access to the reservoir for outdoor recreation would be curtailed during the duration of the project. Since the time period for completing Alternative 5 is significantly longer than for 4, the attainment of acceptable PCB concentration levels in fish would be a difference in approximately 5 years. However the planning and implementation durations associated with 5 are significantly greater which lessens the period for achieving the final desired outcome. Having stated these facts, NCWF realizes the cost differential between 4 and 5 is \$535,993,000. This a monumental cost associated with a minimal gain in attained goals in comparison with the time frame gains.

In summation, NCWF restates its support for EPA and NCDENR's preferred Alternative 4. This alternative would include: continue existing North Carolina fish consumption advisories and signs, conduct educational and community outreach programs, conduct pre-excavation sampling and endangered mussel study, excavate sediments in Reaches B, C, D and lower Brier Creek, and transport sediments off site for appropriate disposal, site and stream restoration; MNR — periodic monitoring of sediments and aquatic biota in the Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek, and Conduct 5- year review. Alternative 4 is the best habitat alternative when degradation, costs and disruption of outdoor recreation activities are factored.

EPA Response: *EPA appreciates the North Carolina Wildlife Federation's (NCWF) comments supporting the Selected Remedy.*

F. Responses to Comments submitted by The North Carolina Wildlife Federation Capital Chapter (NCWF CC)

64. The NCWF CC is a local chapter of the North Carolina Wildlife Federation. Our chapter has recently formed as a non-governmental organization to protect and enhance the natural resources and wildlife habitats of the NC Capital Area for all to enjoy. According to the Superfund Proposed Plan Fact Sheet for cleaning up the areas down gradient of the Ward Transformer facility there are five alternatives. The NCWF CC supports Alternative 4: *Excavation and Off-Site Disposal of Sediments in Reaches B, C, and D, and Lower Brier Creek; Monitored Natural Recovery in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; and Institutional Controls.* Alternative 1 — *No Action* and Alternate 2 — *Institutional Controls* do not meet industry standard to treat the damage caused by polychlorinated biphenyls (PCBs). The fact sheet states, "Alternative 1 does not offer protection to human health or the environment in the short or long—term basis." Alternative 2 does not require monitoring, thus the "long-term reduction of risks would not be known." Neither of these Alternatives is acceptable. Alternate 3 — *Monitored Natural Recovery (MNR) and Institutional Controls* is not know to meet the goals of a Superfund cleanup and if implemented "may take a long time to achieve." Alternative 4 and Alternative 5 — *Excavation of Sediments in Reaches B, C, D, and Lower Brier Creek; Excavation/Dredging of Sediments in Brier Creek Reservoir and Lake Crabtree; Off-Site Disposal of Sediments; MNR in Lower Crabtree Creek and Institutional Controls* will meet the goals according to the Fact Sheet; however, the NCWF CC is

concerned with the vast expense, potential degradation of existing habitat, and length of time to implement restoration proposed within Alternative 5.

EPA Response: *EPA appreciates the North Carolina Wildlife Federation Capital Chapter's (NCWF CC) comments supporting the Selected Remedy.*

G. Responses to Comments submitted by James H. Sherman

65. The USEPA failed to understand that future dredging of Lake Crabtree and Briar Creek Reservoir may be necessary to ensure their continued function in flood control. If these lakes are dredged in the future, as is probable to restore their original design function, the sediment disturbed by unqualified companies could create an ecological disaster in the lakes and distribute large quantities of contaminated sediment to downstream areas. The USEPA must ensure that future dredging of Lake Crabtree and/or Briar Creek Reservoir is performed by qualified individuals and the sediments are disposed of appropriately. There is a long history of contaminated sediments being removed from the watershed, without anyone being able to identify their disposal location. That history must not be repeated. Institutional Controls against dredging Lake Crabtree and Briar Creek Reservoir must be required, or those lakes must be dredged now. Without resolving the issue of future dredging and disposal of contaminated sediments, there can be no MNR, there will be no "Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment," and the "Overall Protectiveness of Human Health and the Environment" will not be attained (and could be made worse).

EPA Response: See response to comment number 59 regarding dredging.

EPA believes that between the on-going removal action; and the OU1 additional creek excavation and MNR, the overall Site remedy will successfully achieve "Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment" and "Overall Protectiveness of Human Health and the Environment"

66. Data contained in the Remedial Investigation led to the USEPA conclusion that the concentrations of PCBs in sediment were not increasing with depth. Because available data indicate that the PCBs are not being buried by new sedimentation, but instead are evenly distributed in the sediments, the data indicate that MNR alone will not be successful in attaining the cleanup goals. Any MNR should be quantified in a demonstration project before being selected as a final remedy.

EPA Response: *EPA believes that source control in the form of the on-going removal action and the proposed action for OU1 will remove contaminated soil and sediment and will result in cleaner sediments entering these impoundments. EPA believes that enough data is available at this time to select the remedy and continue source removal by excavating Reach B, Reach C, Reach D and lower Briar Creek together with MNR. A monitoring program will be developed to evaluate the effectiveness of MNR and the overall Selected Remedy for OU1.*

67. Data contained in the Remedial Investigation clearly show that concentrations in fish have not decreased, and may have even increased, during the last five years. As such, the data indicate MNR is not restoring the fishery. Some degree of dredging Lake Crabtree should be used in combination with MNR to restore the fishery and ecological habitat.

EPA Response: *EPA believes that the first step on MNR is source removal. After source removal activities are completed, as proposed in the Selected Remedy, it will be more appropriate to start evaluating the effectiveness of the MNR component of the remedy.*

68. Overall, the sediment data demonstrate MNR has not worked over the past 20 years and will not resolve this problem within 9 years, as is assumed in the Proposed Plan. Some combination of "Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment" is necessary to compliment MNR in downstream areas.

EPA Response: *The overall Site remedy does not rely on MNR only. Section 13 of the ROD documents all the components of the Selected Remedy. The on-going removal action (which include soil treatment) together with the excavation component of the Selected Remedy will achieve source removal. EPA believes that source removal together with MNR will successfully achieve "Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment."*

69. I believe the USEPA has vastly overestimated the costs dredging operations at Lake Crabtree and Briar Creek Reservoirs. While I have not reviewed the longterm maintenance plans for those reservoirs, I believe there are estimates of the cost of dredging those reservoirs in their long-range budgets. Those estimates are certainly lower than \$250 Million/reservoir. USEPA should work with the County and the Airport Authority to better understand their estimated future dredging needs and costs and revise the cost estimates in the Proposed Plan accordingly.

EPA Response: *EPA believes that the cost estimates developed for the Proposed Plan are appropriate for the intended use.*

70. The EPA should work much closer with Wake County, the city of Raleigh, the Airport Authority, the Town of Morrisville, and the Town of Cary to develop an innovative solution to the dredging issue. The current proposed Plan lacks creativity and should have presented remedial options somewhere in between Alternative 4 (\$5 Million) and Alternative 5 (\$540 Million).

EPA Response: *EPA believes that the Selected Remedy will adequately protect human health and the environment and will achieve remediation goals. EPA looks forward to continuing to work with Wake County, the city of Raleigh, the Airport Authority, the Town of Morrisville, and the Town of Cary, as this clean up project moves forward.*

H. Responses to Comments submitted by the North Carolina Association of Black Lawyers' Land Loss Prevention Project (LLPP)

Please find below comments on behalf of the North Carolina Association of Black Lawyers' Land Loss Prevention Project (LLPP). LLPP was founded in 1982 to address the loss of land by African-American landowners. The mission later was expanded and the organization provides free legal services to all low- income landowners throughout North Carolina in an effort to protect their property from loss or harm, including environmental harm.

Although the submitted plan only deals with Operable Unit One, it is not clear when or whether the public has the opportunity to comment on outreach actually being planned. "Outreach" is not clearly laid out or defined, although there are references to the fact that "outreach" will be done, and this plan is only highlighted in bullet form. We are offering comments to the agency to express our concern with the apparent lack of involvement by community members and community-based organizations in this process.

The comments include suggestions for the design and implementation phases of Remedial Alternative 4.

- 71.** Fish consumption advisories and signs should contain clear, consistent language and be more widely posted.

At the public meeting on August 14, 2007, Wake County officials indicated that there are 30 bilingual signs posted around Lake Crabtree. Given that Lake Crabtree is a 520-acre lake, this number should be increased to ensure that people are actually informed. There should be increased posting at commonly-used fishing locations. Additionally, it is of concern that no mention was made of signs around water bodies besides Lake Crabtree. Of course, signage is needed at common fishing spots along Brier Creek Reservoir, Brier Creek, Little Brier Creek, Crabtree Creek, and any other contaminated creeks or tributaries, especially since there have been higher PCB levels in fish caught in some of these water bodies than in Lake Crabtree.

As of 9/18/07, the Wake County website for Lake Crabtree contains a fish advisory page, at <http://www.wakegov.com/envirohealth/fish/default.htm>, that states, "DO NOT take any fish from Lake Crabtree, or Crabtree Creek, just above or below the lake. Later in this page, as well as in the Fish Advisory Fact Sheet <http://www.wakegov.com/envirohealth/fish/factsheet.htm>, it recommends eating only one meal per month of fish other than carp or catfish. Of the pamphlets and advisories available, only the pamphlet "Lake Crabtree and PCBs: What you should know," Summer 2007, indicates that only one meal per month should be eaten of carp, catfish, and largemouth bass from Crabtree Creek, including upstream of Lake Crabtree. In addition, the links on the Wake County site lead to the Summer 2006 pamphlet, which does not include the advisory against eating fish upstream of Lake Crabtree. I found the Summer 2007 pamphlet only through a link from the Neuse Riverkeeper page.

The information in these publicly-available materials needs to be made simple, clear, and consistent. The likelihood that fishermen will be interested in comparing and parsing the various advisories and pamphlets is small at best. If Wake County is pursuing a catch-and-

release-only policy, then even the once-a month allowed consumption for certain fish in certain areas is not totally consistent with this policy. The danger is that fishermen will see contradictory information and disregard all of it, assuming it is out-of-date or otherwise not to be taken seriously. Please work for maximum consistency and clarity in all materials, in English and Spanish, especially in the posted signage.

EPA Response: *Signs were installed at common fishing spots along all OUI areas where fish advisories were issued by the State of North Carolina. Table 6 and 7 of the ROD (see Section 6.6.2) describe the areas within OUI, where fish advisories were issued and the criteria for limiting fish consumption. All signs provided by EPA followed the State fish consumption advisory recommendations for no-fish consumption or limited consumption depending on the PCB levels for each location.*

EPA agrees that the all materials should be simple and clear. EPA will work toward that goal. The "catch and release" policy implemented at Lake Crabtree County Park was the county's answer to a simpler and easier to follow and enforce fish consumption advisory at the county park.

72. Community outreach programs should include face-to-face communication with fishermen, targeted mailings, and information about alternative fishing locations.

The Proposed Plan states that "community outreach and public educational programs would also be conducted to inform the public of the fish consumption advisories and signs." There has also been no explanation by the Agency as to how it determined which language(s) the signs should be posted in, and how it was determined who is actually fishing in the lake. The agency and county should utilize community-based organizations that are actually engaged in community work with the individuals most likely to be using the lake or streams for fishing. This outreach should include face-to-face communications with fishermen by county park rangers or health department employees.

Outreach materials should also include targeted mailings to residents and businesses nearest to the affected water bodies. Address information can be obtained from Wake County's tax office and from online GIS maps.

Materials should offer suggestions as to alternate fishing locations that are known to have safe levels of PCBs and other contaminants. Fishermen who are given other choices of where to fish would probably be more likely to forego eating contaminated fish.

EPA Response: *The Selected Remedy includes components to continue or enhance existing North Carolina fish consumption advisories and signs, and to develop and implement educational and community outreach programs See Section 13 of the ROD. As part of the remedial design, an implementation plan to comply with these two components of the remedy will be developed. Coordination between the appropriate stakeholders would be necessary to develop this plan. The plan will define the goals, roles, duties and responsibilities of the parties involved and the means used to achieve the intended goals.*

EPA appreciates and recognizes the suggestions and welcomes NC LLPP future input when developing the plan.

73. Transportation of sediments off-site for "appropriate disposal" must be done in such a way as to protect the health of nearby residents and the health of residents at the ultimate disposal site.

The Proposed Plan does not indicate where the excavated sediment will be taken for disposal, only that the disposal will be "off-site" and "appropriate." This leaves very large gaps left for the design and implementation phases regarding whether the health of the residents near the transport and disposal sites will be taken fully into account no matter their race or income level.

As is well-known in North Carolina and in the national environmental justice movement, a PCB landfill was sited in the early 1980s in a small, low-income, mostly African American community in Warren County. The site was chosen despite community protest, and despite a very shallow water table in an area where residents relied on well water. As lead agency, and in accordance with Administrator Steven L. Johnson's reaffirmed commitment to environmental justice in his November 4, 2005 letter, the EPA should take the responsibility to ensure that, through all phases of excavation, transport, interim storage, and final disposal, the health of the nearby residents is given full attention, regardless of whether the community is small, low-income, and/or primarily a community of color. As you appreciate, disposal should not occur in a community that already bears a disproportionately large number of undesirable land uses. Disposal should occur where it is safest to do so, not where the community is viewed as least powerful or least likely to protest.

Choosing an alternative that involves off-site disposal rather than on-site treatment requires a commitment to the health of those living and working near the disposal site. While site determinations will presumably be made mostly in the design and implementation phases, the commitment should be made explicit in the Plan, rather than merely asserting that the off-site disposal will be "appropriate."

EPA Response: EPA agrees that the disposal of the excavated material should occur "where it is safe to do so". Characterization and disposal of the excavated material will be conducted in accordance with all applicable relevant and appropriate requirements (ARARs). Additional sampling of the material will be necessary prior to determining the specific requirements that would apply, and the qualified facilities that are permitted by the State and/or Federal government to receive the material.

74. The Plan should include safety measures regarding human contact with sediment before and during excavation

According to the Proposed Plan the "main risks associated with contaminants at the Operable Unit 1 study area are due to human consumption of contaminated fish; and the potential exposure to sediments with PCB concentrations above 1 mg/kg" (emphasis added) While the Plan includes fish consumption advisories and signs to safeguard the public, it does not

include measures to safeguard the public from potential exposure to sediment prior to and during excavation. Ways to address this could include incorporating information about sediment exposure in the "educational and community outreach" programs; posting sediment exposure signs in areas of concern; ensuring excavation workers will have proper apparel and equipment to protect them from PCB exposure; and restricting public access to areas with high PCB levels in sediment.

EPA Response: *EPA will take measures to prevent potential exposure to contaminated sediments at unacceptable levels. EPA will ensure cleanup crews wear the appropriate personal protective equipment.*

I. Responses to Comments submitted by The Town of Cary

75. The Town of Cary owns property adjacent to Crabtree Lake which is owned by Wake County. The presence of polychlorinated biphenyls (PCBs) has been confirmed in the lake. The property owned by the Town of Cary serves as a part of the Town's greenway system and is used by hundreds of citizens. During and after significant rain events, water and sediment from Crabtree Lake and its tributaries affect this adjacent greenway. The cleanup and monitoring of Crabtree Lake is of vital importance to the health of citizens of Cary. I am writing this letter in support of the comments and recommendations made by Tony Gurley, Chairman of the Wake County Board of Commissioners in his letter dated October 1, 2007 addressed to you.

EPA response: *EPA recognizes the importance of Lake Crabtree to the Town of Cary and its citizens. PCBs were not detected in Lake surface water samples or soil samples collected from the greenway areas. Unacceptable risks exist due to consumption of contaminated fish from the Lake. The selected remedy requires that sediment and fish will be monitored until remediation goals are achieved.*

J. Responses to Comments submitted by The City of Raleigh

The City of Raleigh has carefully examined the EPA Proposed Remedial Action Plan for OU1 at the Ward Transformer Site. The City of Raleigh is appreciative of the substantial progress now being made in the removal action. It appears that the threat of continued pollution to the Crabtree Creek and Brier Creek systems from the site will soon be eliminated.

The City also appreciates the work done to move forward the final Remedial Action Plan for the Site and the waterways contaminated by PCBs and other toxic and hazardous wastes released from the Ward Transformer Site. The presentation of the Proposed Remedial Action Plan for OU1 is a significant benchmark. The City has previously expressed its concerns about the adverse impact the Site and its contamination has had on the quality of life for the citizens of Raleigh and Wake County.

The City has reviewed the comments being submitted by the Environmental Stewardship Concepts (the consultant to the Technical Advisory Group), Wake County

and Dr. Jim Sherman. The City commends those comments to USEPA for its careful consideration. The comments reflect several of the City Council's findings consequent to the report from the PCB Task Force created by the most impacted local governments in Wake County.

Inadequate Sampling Data:

- 76.** The City shares the concerns expressed as to adequacy of the sampling information upon which decisions are proposed to be made on the remedial action in Brier Creek Reservoir. The City concurs with their comments that too few samples have been taken to conclude the area is without sufficient concentrations to require removal of the contaminants. Accordingly, the City requests that the Proposed Remedial Action Plan be modified at a minimum, to include more extensive sampling of the sediments in Brier Creek Reservoir before a final decision is made on sediment removal. The nature of sediment accumulation would strongly suggest that Brier Creek Reservoir should be one of the main repositories of contaminated sediments from the Site. Since the primary contaminants of concern bind to soil particles and thus move, or stay fixed in place, according to sediment transport, Brier Creek Reservoir should have functioned as a collection point for the Ward Transformer Site contaminants of concern for many years. Given the actionable concentrations in Brier Creek between the Brier Creek Reservoir and Lake Crabtree and the high PCB levels in the Reach D immediately upstream of the Reservoir, the potential for high PCB and other toxic or hazardous concentrations in the sediment deposits in Brier Creek Reservoir requires more study to conform to the Recommendations in the PCB Task Force Findings and Recommendations adopted by the Raleigh City Council. In particular the Following determinations support such a request:

II. 5. The local governments should request that EPA and NCDENR develop a remedial plan to prevent further spread of the PCB contamination downstream of Lake Crabtree and to restore the natural resources already impacted, including Lake Crabtree. In the development of the remedial plan and its implementation, EPA and NCDENR should be requested to consult with representatives of local governments.

II. 10. Complete removal of contaminated sediments from Lake Crabtree and the waterways leading to and from Lake Crabtree should be evaluated as a remedial option in any remediation plan, as without removal of the sediments the fishery will not be restored, contamination will continue to migrate, and risks from exposure to impacted soils and sediments will remain unchanged. In the development of the remediation plan for the natural resources and its implementation, EPA and NCDENR should be requested to consult with representatives of local governments.

II. 16. EPA and the local governments should assemble maps providing current and potential land uses/zoning restrictions for the impacted waterways and adjacent properties and ensure that current and potential future uses are thoroughly evaluated by the PA and do not result in unacceptable risks to the community from exposure to contaminated soils and sediments. Local governments and park officials should also consider contamination and health risks when approving any project

that will bring more people into contact with the contamination or increase current exposures to the contamination.

EPA Response: *EPA believes that enough data is available to select the remedy and continue source removal activities along Reaches B,C, and D. A conservative decision was made when EPA decided to include excavation along Lower Brier Creek as part of the Alternative 4 remedial action. The selected remedy requires additional sampling from lower Brier Creek prior to any excavation activities. If the results from the additional sampling along Lower Brier Creek show results below the 1.0 ppm remedial goal, no excavation will be required along Lower Brier Creek.*

The selected remedy also includes a monitoring program component. As part of this monitoring program, samples from Brier Creek Reservoir will be collected.

Unmitigated Impacts to Wake County:

77. The City also joins in the comments previously cited which seek a revision of the Proposed Remedial Action Plan to address the burdens left with Wake County should the reservoirs not be cleaned of PCBs in the Remedial Action. The impoundments were created as flood control impoundments. The continued deposition of sediment limits the value of the impoundments and will ultimately require sediment removal to restore the appropriate level of flood control. The impoundments are a critical source of protection to heavily populated and developed areas in the City, including the Crabtree Valley Shopping Mall. When the sediment removal occurs, the County will be confronted with substantial additional costs because of the PCBs and other toxic and hazardous substances in the sediment. The Proposed Plan does not address a means to compensate the County for those costs which arise exclusively from the Ward Site.

See response to comment number 59 above regarding potential dredging.

Prompt Restoration of Lost Uses of Crabtree Creek:

78. As the above cited provisions and other sections of the PCB Task Force Findings and Recommendations show, the City is concerned with the adverse impacts its citizens have suffered in their use of natural resources, in particular fishing and other uses of the Crabtree Creek system. The City continues to urge that a Final Remedial Action Plan be adopted expeditiously, but that the plans also assure the most prompt restoration of Crabtree Creek to the full panoply of uses that it supports under the Clean Water Act.

EPA Response: *EPA plans to implement the Selected Remedy as expeditiously as possible while complying with the requirements of CERCLA and the National Contingency Plan (NCP).*

Conclusion

79. The City of Raleigh is appreciative of the courtesy extended by USEPA throughout the process. The City is hopeful that relationship will continue and that this set of comments, along with the comments of the TAG and Wake County will be given strong consideration by USEPA in its Final Remedial Action Plan. While the costs of Alternative 5 are high,

the further information in the Proposed Remedial Action Plan shows that sediment removal from Brier Creek Reservoir would be approximately \$102 million of the \$541 million in total costs for Alternative 5. As with other comments, the City questions whether that cost estimate is excessive. The City urges USEPA, in consultation with the PRP's if necessary, to seek less expensive means to remove the sediment from Brier Creek Reservoir as it likely contains an unacceptable level of pollution which will continue to further degrade Lake Crabtree.

EPA Response: Based on the information available to date, EPA is not recommending excavation of Brier Creek Reservoir as part of the Selected Remedy.

K. Responses to Comments submitted by Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. ("PEC" or the "Company")

Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. ("PEC" or the "Company") has been actively engaged with the United States Environmental Protection Agency ("EPA") and the North Carolina Department of Environment and Natural Resources ("NCDENR") on the cleanup of the Ward Transformer site. The Company appreciates the opportunity to comment on the EPA's Superfund Proposed Plan for the OU1 Site issued in August 2007 (the "OU1 Proposed Plan").

Summary of PEC's Comments on OU1 Proposed Plan

The Company and its environmental consultants have carefully reviewed and considered the OU1 Proposed Plan and recommendations concerning how to address polychlorinated biphenyl ("PCB") contamination at the OU1 Site, which is comprised of various areas located downstream from the Ward Transformer site and Reach A, including Reaches B and C (unnamed tributaries to Little Brier Creek); Reach D (Little Brier Creek); Brier Creek Reservoir; Lower Brier Creek; Lake Crabtree; and Crabtree Creek. PEC has been actively involved and assisting with the contaminated soil/sediment removal action at the source areas of the PCB contamination—specifically, the Ward Transformer facility, Reach A and certain other immediate surrounding areas (collectively, the "Facility"). This EPA-approved removal action, which began in August 2007, is a complete excavation and cleansing of soil and sediments at the Facility that not only will eliminate the original sources of PCB contamination, but also prevent future down-gradient migration of PCB contamination from these source areas into the waterways constituting the OU 1 Site.

PEC believes that virtually all source contaminants will be removed by the ongoing removal action at the Facility. The Company understands that EPA and NCDENR are proceeding to ensure that remaining adverse environmental and ecological impacts, if any, to the OU1 Site from past business operations of the Ward Transformer Company ("Ward") are addressed in an appropriate manner. After considering the five (5) Remedial Alternatives set forth in the OW Proposed Plan, PEC supports implementation of Alternative 4 as modified below ("Modified Alternative 4"). PEC agrees with EPA's position that Monitored Natural Recovery ("MNR") and institutional controls are especially suitable for the OU1 Site, where the

primary, original source of PCB contamination at the upgradient Facility and Reach A already is being removed. PEC understands EPA's reasoning to include additional excavation and off-site sediment disposal of PCB constituents in Reaches B C and D under Alternative 4 because sediment sampling data shows PCB concentrations in Reaches B, C, and D above EPA's remedial goal and cleanup level of 1.0 parts per million ("ppm"). PEC believes that EPA's proposal to require additional pre-excavation sampling and excavation/dredging removal actions in Lower Brier Creek (that portion of Brier Creek located between Brier Creek Reservoir and Lake Crabtree) is unwarranted because sediment sampling in Lower Brier Creek does not show PCB concentrations above EPA's remedial goal of 1.0 ppm. Instead, PEC believes that appropriate MNR with institutional controls should be implemented for Lower Brier Creek.

I. Introduction

PEC was one of hundreds of companies that did business with Ward during Ward's 40- plus years of operations at the Ward Transformer site located along Mount Herman Road in a predominantly industrial area of northwestern Raleigh, Wake County, North Carolina. From approximately 1964 to 2005, Ward built, repaired, sold, and reconditioned electrical transformers at the Ward Transformer site. As a result of Ward's business operations, PCBs were released into the environment. Because PEC did business with Ward, it was one of approximately forty (40) companies EPA initially contacted when the Ward Transformer site was added to the Superfund National Priorities List in 2003. Ultimately, in September 2005 and despite its limited and infrequent dealings with Ward, PEC, along with three (3) other companies, entered into an Administrative Settlement Agreement and Order on Consent with EPA to implement and shoulder the full cost of the PCB cleanup and removal action at the Facility.

II. EPA's Remedial Action Objectives and Remedial Alternatives for OU1 Site

Generally, in selecting a remedy at Superfund sites, EPA's goal is to "eliminate, reduce, or control risks to human health and the environment."³ In the OU1 Proposed Plan EPA articulated the following three (3) Remedial Action Objectives:

- Eliminate or minimize any potential risks to human health or the environment due to consumption of contaminated fish from Brier Creek, Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek, by reducing PCB concentrations in fish to regulatory or risk-based levels;
- Eliminate or minimize any potential risks to human health or the environment due to direct contact with contaminated sediments in Reaches B, C, and D and Lower Brier Creek by reducing PCB concentrations in sediments to regulatory or risk-based levels; and
- Minimize any potential downstream migration of PCB-contaminated sediments.

In order to achieve these Remedial Action Objectives, EPA considered five (5) Remedial Alternatives in its OU1 Proposed Plan. The following is a brief summary of each Remedial Alternative:

Alternative 1 — No Action. EPA is required to consider the No Action alternative pursuant to the remedy evaluation and selection process set forth in 40 C.F.R. § 300.430. Under the No

Action alternative, no remedial actions would be implemented at the OUI Site and existing site conditions would not be subjected to any active remediation or institutional controls. As would be the case for all of the Remedial Alternatives, the No Action alternative would include a review of the remedy every five (5) years for thirty (30) years, as required by the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA" or "Superfund").⁵

Alternative 2 — Institutional Controls. Under this alternative, fish consumption advisories and appropriate signage would continue in effect with additional and related public outreach efforts to reduce the potential risks to human health through fish consumption.

Alternative 3 — MNR and Institutional Controls. In addition to implementing the institutional controls set forth in Alternative 2, periodic monitoring of sediments and fish sampling would be conducted over time while allowing naturally occurring processes to contain and/or reduce the bioavailability or toxicity of contaminants in media, thereby reducing any potential risk to human health and/or ecological receptors.

Alternative 4 — Excavation and Off-Site Disposal of Sediments in Reaches B C D. and Lower Brier Creek and MNR in Brier Creek Reservoir. Lake Crabtree and Lower Crabtree Creek; and Institutional Controls. This alternative generally involves implementation of

Alternative 3 plus (i) conducting pre-excavation sampling to accurately delineate the limits of excavation areas in Reaches B, C, D and Lower Brier Creek; (ii) conducting a mussel survey to determine if threatened or endangered species of mussel are present in areas selected for excavation; (iii) excavation and appropriate off-site disposal of sediments from Reaches B, C, D, and Lower Brier Creek; and (iv) post-excavation site and stream restoration work.

Alternative 5 — Excavation and Off-Site Disposal of Sediments in Reaches B, C, D, and Lower Brier Creek; Excavation/Dredging of Sediments in Brier Creek Reservoir and Lake Crabtree; Off-Site Disposal of Sediments; MNR in Lower Crabtree Creek and Institutional Controls. This alternative generally involves implementation of Alternative 4 plus dredging and/or excavating sediments in Brier Creek Reservoir and Lake Crabtree with appropriate off-site disposal.

The EPA must consider nine (9) criteria when evaluating these Remedial Alternatives for the OUI Site. These evaluation criteria include the following:

1. Overall protection of human health and the environment;
2. Compliance with Applicable or Relevant and Appropriate Requirements ("ARARs");
3. Long-term effectiveness and permanence;
4. Reduction of toxicity, mobility, or volume of contaminants through treatment;
5. Short-term effectiveness;
6. Implementability;
7. Cost;
8. State acceptance; and

9. Community acceptance

Based upon its comparative analysis of the five (5) Remedial Alternatives using the above-referenced criteria, EPA concluded in the OUI Proposed Plan that its preferred alternative for the OUI Site is Alternative 4.

III. Discussion of Alternative 1 Alternative 2 and Alternative 3

PEC understands that EPA believes Alternative 1 (No Action) should not be implemented because it does not provide adequate protection to human health and the environment and would do little to address the environmental concerns in our community over PCB contamination from the Ward Transformer site. The Company further understands that EPA feels Alternative 2 (Institutional Controls), while it includes important institutional controls that must be continued and augmented as necessary (*i.e.*, fish consumption advisories, posting of signs and educational/community outreach programs, etc.), does not go far enough toward protecting human health and the environment because without implementation of any overall monitoring program, it will be nearly impossible to determine if and when any of the Remedial Action Goals for the OUI Site are achieved.

PEC agrees with EPA that implementation of Alternative 3 (MNR) likely would reduce any potential risk to human health and the environment over time through naturally occurring processes to contain and/or reduce the bioavailability or toxicity of PCB contaminated sediments along the OUI Site. The OUI Proposed Plan recognizes that MNR especially suitable for a site such as this where the main source of contamination will be removed." The implementation of an appropriate periodic monitoring program of sediments and fish sampling conducted over time will provide EPA, NCDENR, local governments and interested citizens with the technical data needed to determine when the Remedial Action Goals for the OUI Site are achieved, as well as when changes might be needed with respect to fish consumption advisories and other institutional controls, so as to eliminate or minimize potential risks to human health due to consumption of contaminated fish.

There are also benefits to the environment and ecological systems within the OUI Site by pursuing MNR, instead of undertaking the significant land-disturbing activities, dewatering and wetland/streambed/habitat disruptions associated with not only the excavation and dredging removal actions contemplated by Alternative 4 and Alternative 5 but also the construction of access roads and equipment storage and "lay down" areas needed to accomplish such removal actions. MNR typically involves no man-made physical disruption to the existing biological community, which may be an important advantage for some wetlands or sensitive environments where the harm to the ecological community due to sediment disturbance may outweigh the risk reduction of an active cleanup."

IV. PEC Agrees with EPA that Alternative 5 Should Not Be Implemented

Alternative 5 generally involves the complete implementation of Alternative 4 (discussed in more detail below), plus dredging and/or excavating sediments in Brier Creek Reservoir and Lake Crabtree with appropriate off-site disposal. PEC fully agrees with EPA's assessment that Alternative 5 is not appropriate for the OW Site for several reasons.

First and foremost, the significant and widespread environmental impacts resulting from large-scale dredging and excavation operations in and around Brier Creek Reservoir and Lake Crabtree far outweigh the minimal additional environmental benefits Alternative 5 may present. "The [EPA] project manager should consider the impact of habitat loss or alteration in evaluating a dredging or excavation alternative. . . . [i]t is important to determine whether the loss of a contaminated habitat is a greater impact than the benefit of providing a new, modified but less contaminated habitat."⁹ EPA correctly finds in the OUI Proposed Plan that large-scale excavation/dredging operations in Brier Creek Reservoir and Lake Crabtree "will disturb or destroy benthic and other aquatic biota [and avian biota] and habitats in the reservoir and the lake".

The adverse impacts to the environment and existing ecosystems associated with implementation of Alternative 5 are not simply confined to the beds of Brier Creek Reservoir and Lake Crabtree. Excavation, dredging and necessary dewatering work would require that large sections of wooded areas and wetlands be completely destroyed and/or filled. Neighboring wetlands, floodplains, old-growth timber, riparian buffers, Lake Crabtree County Park, and other nearby properties also likely will be destroyed, disturbed, or otherwise adversely impacted either by dewatering activities, construction activities (including construction of access roads and utilization of temporary construction easement areas for truck/vehicle parking and equipment storage areas etc), land-clearing activities, increased truck traffic, dust, and noise. EPA also has correctly noted that the dredging/excavation activities of Alternative 5 could adversely impact threatened bald eagles within the Brier Creek Reservoir and Lake Crabtree for foraging and breeding." Re-establishing these sensitive habitats to pre-existing conditions over the long term may be extremely difficult with no guarantee that the threatened bald eagle population will return even after restoration work is completed. The degree and extent of impacts on adjacent and nearby wetlands are unknown in the event Brier Creek Reservoir and Lake Crabtree were completely drained in order to perform the remedial excavation and dredging work contemplated under Alternative 5 (i.e. would significant wetlands and other sensitive water-dependent habitats also be drained and lost?).

The environmental benefits from excavation and dredging of Brier Creek Reservoir and Lake Crabtree appear to be very minimal because no sediment sampling in the reservoir and lake has revealed PCB concentrations above EPA's cleanup level and remedial goal. EPA has determined that the chemical-specific ARAR for PCB concentrations in sediment for the OUI Site is 1.0 milligram per kilogram or 1.0 ppm. This level of cleanup is intended to protect human health from "direct exposure to PCBs in soil and sediment." The PCB sampling data collected for sediments in Brier Creek Reservoir and Lake Crabtree has not revealed any PCB levels exceeding EPA's remedial goal of 1.0 ppm.

Surface water samples collected at Lake Crabtree and Brier Creek Reservoir and soil samples collected at recreational areas within the Lake Crabtree floodplain have not detected PCBs in any of the samples collected.³ Moreover, the maximum PCB concentration detected in sediments in Lower Brier Creek (extending from the Brier Creek Reservoir to Lake Crabtree) is 0.28 ppm, well below EPA's remedial goal. For purposes of Alternative 5, due to the fact

that PCB levels detected in Brier Creek Reservoir and Lake Crabtree "already are in the low ppm range," it is assumed in the OUI Proposed Plan that all of the sediments in Brier Creek Reservoir and Lake Crabtree would have to be removed to ensure that the availability of very low PCB levels is completely eliminated for ecological receptors:⁴ PEC believes that the low levels of PCB concentrations found in Brier Creek Reservoir, the floodplain around Lake Crabtree and Lower Brier Creek (that feeds into Lake Crabtree) does not support implementation of such an invasive and physically destructive remedy as is proposed in Alternative 5 (or as discussed more fully below in Section V, EPA's proposal to include excavation and dredging of Lower Brier Creek in Alternative 4).

Excavation and dredging work in Brier Creek Reservoir and Lake Crabtree could mobilize and spread the low levels of PCB contamination through re-suspension:⁵ EPA also has acknowledged that if dredging is used, due to technological limitations, residuals will remain, "including low levels of PCB contamination in the biologically active sediment zone" and that "dredging residuals could impact fish concentrations in the reservoir and lake for many years after completion of the dredging operations."" There is always a level of uncertainty about the ability of excavation and dredging techniques to achieve their goals because it is difficult to estimate not only the possible impacts from re-suspension, but also the residual contamination that will inevitably remain following removal.

Second, completion of the EPA-approved source removal action at the Facility (including Reach A), together with the implementation and completion of the remedial actions contemplated in Alternative 4 for Reaches B, C, and D, should effectively eliminate human health risks from contaminated sediment and prevent any future down-gradient migration of PCBs from the Ward Transformer site into the Brier Creek Reservoir, Lower Brier Creek, and Lake Crabtree. Thus, it can reasonably be expected that the low levels of PCBs in Brier Creek Reservoir and Lake Crabtree will continue to decrease after the PCB contamination source has been addressed at the Facility and in Reaches B, C, and D. MNR is especially suitable for these down-gradient areas of the OW Site, where the main source of PCB contamination at the up-gradient Facility and Reach A is already being removed.

As discussed in further detail in Section V below, some periodic monitoring of aquatic biota in Lower Brier Creek, Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek is appropriate and will provide EPA, NCDENR, local governments, and interested citizens with the assurance and technical data needed to determine when changes may be needed with respect to fish consumption advisories and other appropriate institutional controls so as to eliminate or minimize any potential risks to human health. Potential risks to human health at the OUI Site are based, in part, on the consumption of fish from Brier Creek Reservoir, Lake Crabtree, and, to a lesser extent, Crabtree Creek. To minimize these risks, since December 2003, the North Carolina Department of Health and Human Services has issued several fish consumption advisories regarding certain waterways along the OUI Site. In November 2005, Wake County adopted a policy of "catch and release only" fishing for Lake Crabtree and Crabtree Creek (below Lake Crabtree) and has conducted other outreach efforts advising the public to conduct catch-and-release fishing.

Third, the implementation of Alternative 5 is much more complex and difficult than

Alternative 4 and will require considerably more time. Due to the sheer complexity, scope and increased permitting and consultation efforts necessitated by Alternative 5 it would do very little in terms of decreasing the actual amount of time required for fish tissues to attain acceptable health-based concentrations of PCBs--one of EPA's Remedial Action Goals for the OU1 Site. Under Alternative 4, EPA projects that fish in Lake Crabtree would attain acceptable PCB concentrations in approximately nine (9) years and fish in Brier Creek Reservoir would attain acceptable PCB concentrations in approximately fourteen (14) years. Under Alternative 5 EPA projects that fish in Lake Crabtree would attain acceptable PCB concentrations in approximately eight (8) years after excavation and dredging work, and fish in Brier Creek Reservoir would attain acceptable PCB concentrations in approximately twelve (12) years after excavation and dredging was completed. When compared with Alternative 4 implementation of Alternative 5 at best, would reduce the projected period of time for fish tissue in Lake Crabtree to attain acceptable concentrations by only one (1) year and for fish tissue in Brier Creek Reservoir by only two (2) years. Therefore, EPA correctly noted in its comparative analysis of the short-term effectiveness of Alternative 4 and Alternative 5 that the removal of a larger amount of sediments does not necessarily correspond to a shorter amount of time to achieve cleanup goals. Given the many variables with respect to the planning, design, construction, permitting and consultation (including endangered and threatened species identification) associated with Alternative 5 it is reasonably conceivable that implementation and completion of Alternative 5 could actually result in it taking longer to achieve acceptable health-based fish tissue concentrations than what EPA projects under Alternative 4 through MNR implementation at Brier Creek Reservoir and Lake Crabtree.

Fourth, implementation of the excavation and dredging work under Alternative 5 will significantly compromise the natural flood control features afforded by the existing Brier Creek Reservoir, Lake Crabtree, and connected wetlands for several years. Without this natural flood control, stormwater runoff from significant rain events could cause or contribute to unanticipated flooding in neighboring areas, roads, and infrastructure. Lastly, Lake Crabtree probably would not be available for public recreational use (or subject to limited uses) for significant periods of time during the sediment removal process. Access and use of Lake Crabtree County Park also could be adversely impacted or curtailed.

V. PEC Requests EPA to Select Modified Alternative 4—Excluding Sampling and Excavation of Lower Brier Creek—As the Preferred Alternative for the OU1 Site

PEC requests that EPA select as the preferred alternative for the OU1 Site the following Modified Alternative 4. PEC's support of Modified Alternative 4 is predicated upon the fact that the ongoing EPA-approved removal action at the Facility (including Reach A) is removing virtually all of the PCB contamination. Together with future implementation of selective sediment removal actions in Reaches B, C, and D, these actions will address the human health risks associated with exposure to contaminated sediment and minimize any potential downstream migration of PCB-contaminated sediment. Thus, two of the three Remedial Action Objectives for the OU1 Site (*Le.*, eliminating or minimizing human health risks due to direct contact with contaminated sediment and minimizing potential downstream migrations of PCB-contaminated sediment) will be achieved upon successful completion of the removal actions at the Facility and Reaches B, C, and D.

The data collected from 2003-2007 during the EPA-led Remedial Investigation shows that no excavation or other disruptive sediment removal actions are warranted downstream of Reach D. Consequently, the significant, adverse ecological and environmental impacts generated by certain aspects of Alternative 4 can be minimized by eliminating Lower Brier Creek from Alternative 4. Although sediment samples in Reaches B C and D have shown PCB concentrations in excess of the 1.0 ppm cleanup level and remedial goal, no sample collected downstream of the Reaches is above the 1.0 ppm cleanup level. Furthermore, PCB concentrations in the OUI Site generally decrease as one moves further downstream. On the basis of this data, EPA should modify Alternative 4 such that no sediment removal actions will be required in Lower Brier Creek, which is downstream from Reach D.

Sufficient representative sampling work already has been conducted in the OUI Site areas located downstream from Reach D. For example, in Brier Creek Reservoir, there has been a sample collected approximately every 25 acres. In Lake Crabtree, a sample has been collected approximately every 23 acres. Neither area has shown any PCB concentrations that exceed the EPA's 1.0 ppm cleanup level and remedial goal. As stated previously, in light of this data, the EPA has appropriately determined that excavation and dredging activities in Brier Creek Reservoir and Lake Crabtree are not warranted. That same approach and reasoning is equally applicable to Lower Brier Creek. At Lower Brier Creek, even though the sampling density has been much higher than that in the reservoir or lake, the sampling results have shown lower PCB concentrations. In Lower Brier Creek, there has been a sample collected approximately every 2.25 acres, with the highest PCB concentration detected being 0.28 ppm, well below the 1.0 ppm EPA cleanup standard.

With particular regard to dredging or excavation alternatives, EPA policy directs its project managers to "consider the impact of habitat loss or alteration in evaluating a dredging or excavation alternative." Therefore, the benefits of reducing contamination along Lower Brier Creek (which already is at levels below EPA's remedial goal) must be weighed against the potential harm to the environment and the alteration or loss of habitat, including habitat for endangered or threatened species. The environmental benefits to be gained from excavation and dredging of Lower Brier Creek appear very minimal because no sediment sampling in Brier Creek Reservoir or Lower Brier Creek has revealed concentrations of PCBs above EPA's remedial goal of 1.0 ppm. Excavation, dredging, and dewatering activities to remove sediments from Lower Brier Creek will disturb or destroy benthic and other aquatic biota and habitats in Lower Brier Creek and cause sections of wooded areas and wetlands to be completely destroyed and/or filled. Neighboring wetlands, floodplains, old-growth timber, and riparian conditions will also likely be destroyed, disturbed, or otherwise adversely impacted either by dewatering activities, construction activities (including construction of access roads, truck/vehicle turnarounds and parking, equipment storage areas, etc.), land-clearing activities, increased truck traffic, dust, and noise. It is not known what impacts would occur on wetlands adjacent to Lower Brier Creek if the streambed has to be re-routed to complete the removal work.³ EPA policy counsels leaving a wetland intact when it is "functioning properly and is not acting as a contaminant source to the biota and the surrounding area."

Additionally, the scope of the sampling associated with MNR in Alternative 4 should be modified to exclude additional sediment sampling once all sediment at the Facility and the OUI Site is remediated to the 1.0 ppm cleanup level. The OUI Proposed Plan states that "Mike Alternative 3 Alternative 4 includes periodic monitoring of sediments and aquatic biota (fish sampling) associated with MNR." While PEC agrees that MNR is an important element of Alternative 4 the scope of MNR activities should be modified from that proposed in Alternative 3 to account for the active removal of sediments at concentrations greater than 1.0 ppm. Sediment sampling for PCB analysis, as part of the MNR activities following implementation of Alternative 4 is unnecessary and inconsistent with the Remedial Action Objectives for the OUI Site. Upon removal of all sediments with PCB concentrations greater than 1.0 ppm, the remaining risk is associated with the consumption of contaminated fish. The best way to assess the degree of contamination in fish is to sample fish tissue. To continue to test sediment samples for PCBs will not provide appropriate data for the purpose of monitoring the natural recovery of the fish.

VI. Conclusion

80. After careful review, PEC believes that EPA should implement a modified version of Alternative 4. Specifically, the Company believes that the best approach is a remedy that includes the beneficial aspects of Alternative 3 and the selective sediment excavation in Reaches B, C, and D. The data does not support sediment excavation in Lower Brier Creek. PEC's view is based primarily on the absence of PCB contamination in Lower Brier Creek above the 1.0 ppm cleanup level and remediation goal. Given that there is no basis for removing soils in that section of the OUI Site, it is not worth the harm to these sensitive environmental areas that would inevitably result from such disruptive activity. There also will be no need for additional sediment sampling in the OUI Site once all residual contamination is removed. Because the implementation of a modified Alternative 4 will achieve two of the three Remedial Action Objectives, the only remaining objective will be to eliminate or minimize human health risks associated with consumption of contaminated fish. To this end, PEC agrees with EPA's position that MNR and institutional controls are especially suitable and will be effective in monitoring PCB concentrations in fish tissue. Once this remedy is complete, we anticipate that all risks to human health and the environment resulting from Ward's operations will have been fully addressed.

EPA Response: EPA does not agree with PEC's request to modify the proposed alternative and reduce monitoring requirements. In fact, based on other comments received and further analysis of the existing data, EPA has decided to require that floodplain soil samples be collected as part of the pre-excavation sampling program component of the Selected Remedy. If the soil sample results show PCB concentration above the 1 ppm remedial goal, these areas will also require excavation.

A conservative decision was made when EPA decided to include excavation along Lower Brier Creek as part of the Alternative 4 actions. The Selected Remedy requires additional sampling from lower Brier Creek prior to any excavation activities. If results from the pre-remediation sampling activities along Lower Brier Creek confirm that sediment and floodplain soil levels are below the 1 ppm remedial goal, no excavation will be required along Lower Brier Creek.

During the remedial design, specific details of the sampling requirements for the pre-excavation activities, MNR program, and the periodic monitoring of sediment and aquatic biota will be finalized. Monitoring will be required in all areas where fish advisories exist and fish data show PCB concentrations in fish above the remediation goal of 0.05 ppm.

IV. TRANSCRIPT OF THE AUGUST 14, 2007 PUBLIC HEARING

Attachment 1 of this report includes a copy of the transcript.

ATTACHMENT 1

1 ENVIRONMENTAL PROTECTION AGENCY
2 SUPERFUND PROPOSED PLAN
3 WARD TRANSFORMER SITE OPERABLE UNIT 1
4
5
6
7
8

9 - - -
10 TRANSCRIPT OF PUBLIC MEETING
11 - - -

12 ORIGINAL
13
14
15
16

17 DATE: August 14, 2007
18 TIME: 7:03 p.m. - 8:16 p.m.
19 PLACE: Raleigh, North Carolina
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21
22
23
24
25

A. WILLIAM ROBERTS, JR., & ASSOCIATES

1 MR. CAMPBELL: I think we're about ready to
2 get started if everyone wants to take a seat. My
3 name is Rich Campbell. I'm a section chief of the
4 Environmental Protection Agency. I think I've met
5 many of you at our meetings before, but I wanted to
6 open the meeting up and kind of give you a little
7 bit of information about what we're going to do
8 here.

9 This is a more formal meeting than I think
10 just about all the meetings we've had in the past
11 in that we're actually taking comments for the
12 record. We have a court reporter who will be
13 taking a transcript of comments that are made. We
14 will try to respond to any kinds of questions you
15 have while we're here, but there will also be a
16 formal responsiveness summary that will come out
17 later. So there will be a written response to
18 issues that are raised at this meeting.

19 Let me now introduce Angela Miller, who is our
20 community involvement coordinator. I think you've
21 probably met her before. She's going to say a few
22 more words about the logistics of the meeting.

23 MS. MILLER: I don't really need a microphone,
24 but, as Rich mentioned, there is a comment period
25 that's in effect right now. It actually started

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1 August the 6th and it originally was supposed to
2 end on September the 4th, but the Neuse Riverkeeper
3 Foundation has asked for an extension. So we're
4 giving a 30-day extension on the comment period.
5 So we will close that out on October 4th. So you
6 can either e-mail your comments to Luis or you can
7 mail them. They just have to be postmarked by
8 October the 4th.

9 Luis is going to start out with a presentation
10 and then after his presentation, we will have
11 question and answers or comments. As Rich said, we
12 do have a court reporter that's transcribing. So
13 at the end of the Q and A, I'm going to walk around
14 with the mic. If you will state your name first.
15 If it's unusual, if you will spell it so we can
16 have that on record.

17 The other thing that we ask is if you have a
18 question, if you could just hold it to the end,
19 that way Luis can get through the presentation and
20 then we will definitely have a question and answer
21 period.

22 And now I'll turn it over to Luis Flores,
23 project manager of the Ward Site.

24 MR. FLORES: Can you hear me? Can you hear
25 me? Higher, okay.

A. WILLIAM ROBERTS, JR., & ASSOCIATES

1 Well, welcome, everybody. I guess first I
2 just want to say thank you for taking the time to
3 come here tonight. Tonight we're going to be
4 presenting the proposed plan for the Ward
5 Transformer Site, Operable Unit 1, Operable Unit 1.

6 Let me start by giving you an outline of my
7 presentation. I'm going to start by giving a brief
8 overview of the Ward Transformer Site. Then I'm
9 going to talk about the scope and role of this
10 proposed plan that we're presenting tonight.
11 That's where I'm going to explain to you why we're
12 calling it Operable Unit 1 and what Operable Unit 1
13 includes. Then I'm going to give you some general
14 findings about the remedial investigation, mainly
15 the main conclusions of the investigation.

16 This was a very complicated and long
17 investigation, a lot of samples were collected.
18 There is a whole remedial investigation report with
19 all the information. And that report is housed in
20 the site repository located at the North Raleigh
21 library here in Raleigh. So you're welcome to go
22 over there and look at the whole report.

23 Then I'm going to talk about remedial action
24 objectives or the goals that we're planning to
25 achieve with this clean-up plan that we're

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1 proposing tonight. Then I'm going to present the
2 remedial action alternatives that we developed to
3 address those or trying to achieve those remedial
4 action objectives and the evaluation criteria that
5 we use in the Superfund program to look at those
6 alternatives. Then I'm going to present to you
7 EPA's preferred alternative to clean up the Ward
8 Transformer Site Operable Unit 1.

9 Then next steps I will let you know what to
10 expect after this meeting and then we'll get into
11 the questions. And, like Angela said, if you take
12 notes of your questions, we'll try to address them
13 at the end of the presentation.

14 The facility, as many of you know, is located
15 very close to the Raleigh-Durham Airport here in
16 Raleigh, North Carolina. It's about 11 acres.
17 It's owned by Ward Transformer Company. The
18 facility, they've been in operation since the '60s.
19 Actually they stopped operation in 2005. Over
20 there in that facility, they rebuilt, repaired,
21 reconditioned and sold electrical transformers.

22 We conducted, EPA conducted a very complicated
23 remedial investigation. A lot of samples were
24 collected. The samples included soil samples,
25 sediment samples, surface water samples,

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1 groundwater samples and fish. The investigation
2 covered a very wide area, which includes the Ward
3 Transformer facility itself, some properties around
4 the Ward Transformer facility and about 30 miles of
5 waterways down gradient from the facility.

6 These maps show what I'm calling the study
7 area, the areas where we collected samples. If you
8 look up here, that's the Ward Transformer Site,
9 Lake Crabtree, the Neuse River over here, Crabtree
10 Creek. Let me give you a few definitions that
11 we're using in this project. We divided the site
12 in different sections to be able to identify the
13 areas that we were going to collect samples. You
14 know, the Ward Transformer facility itself, I guess
15 that's pretty clear. As we start going down
16 gradient from the Ward Transformer facility, we get
17 into the different water bodies down gradient. The
18 first one that we encounter is a tributary to
19 Little Brier Creek.

20 For study purposes, we divided the tributary
21 in three sections. We called the first section
22 Reach A, second section Reach B, and the third
23 section Reach C. After Reach C there is another
24 section that we call Reach D. That Reach D is
25 actually Brier Creek -- I'm sorry, Little Brier

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1 Creek itself.

2 So we got the tributary here divided in three
3 sections and then Brier Creek here. As we go down,
4 we found the Brier Creek Reservoir, then Lower
5 Brier Creek, Lake Crabtree and then all this is
6 Crabtree Creek all the way discharging into the
7 Neuse River. So those were the areas where samples
8 were collected out of the study area.

9 So that was the whole picture, the study area.
10 But in terms of what we're addressing tonight, we
11 are addressing, like I said earlier, Operable Unit
12 1. And what Operable Unit 1 includes, it's
13 basically everything down gradient from Reach B,
14 including Reach B. Reach B and everything down
15 gradient, B, C, D, reservoir, the lake, and
16 Crabtree Creek.

17 Operable Unit 2 is actually the areas up
18 gradient of Reach B and Reach A and the Ward
19 Transformer facility. Those areas are the subject
20 of the ongoing removal action. What we're going to
21 be discussing tonight is Operable Unit 1 and the
22 proposed plan, or the clean-up plan for Operable
23 Unit 1.

24 As expected, the main contaminants of concern
25 were PCBs, or polychlorinated biphenyls. They were

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1 detected in relatively low concentrations in the
2 Operable Unit 1 areas. When I say "relatively low
3 concentrations," I guess I want to define what that
4 means. As part of our risk assessment, we
5 determined that for human exposure -- for human
6 exposure having direct contact with sediment, one
7 part per million or one milligram per kilogram will
8 be a protective number for sediment. Anything
9 above could be considered having an unacceptable
10 risk.

11 So one part per million is kind of like a
12 number that has also been used many times in other
13 site clean-up goals and, like our risk assessment
14 says, is the number we're going to use here for
15 direct contact or human exposure. And when I say
16 "relatively low," it's because in the study -- in
17 the Operable Unit 1 areas, most concentrations are
18 below one part per million. If we make an average
19 of all the samples that were collected, the average
20 concentrations will be below one part per million.

21 There is some of those reaches that has sample
22 points above one part per million. I think the
23 higher one in the Operable Unit 1 area is 4.2 parts
24 per million in Reach D. But Lake Crabtree, the
25 reservoir, and some of the other -- well, Lake

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1 Crabtree actually has all the concentrations below
2 one part per million, the same in the reservoir.
3 And, like I said, Reach D has the highest one,
4 which is 4.2. I'll have a map later showing the
5 results so we can look at those.

6 Also, PCBs were not detected in any of the
7 sediments down gradient from Lake Crabtree. So
8 Crabtree Creek all the sediments were non-detected
9 for PCBs.

10 In addition to all the samples that we
11 collected, sediment and fish and groundwater and
12 surface water, we had a meeting with a group of
13 stakeholders here in Raleigh and we put together a
14 sampling plan. And we collected additional samples
15 to address some specific concerns from the
16 community. Those samples -- in addition to more
17 sediment samples, we also collected soil samples
18 from areas around the Lake Crabtree and Cedar Fork
19 athletic fields. None of those samples -- all of
20 those samples were non-detect. None of the samples
21 show any PCBs. So the recreational areas around
22 Lake Crabtree showed no PCBs. These are the same
23 with the surface water in Lake Crabtree. There was
24 no PCBs detected in surface water.

25 This map -- I'm going to now show the sample

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1 locations, sediment sample locations in the areas
2 that are part of Operable Unit 1. I'm going to
3 start from the further down gradient part from the
4 side, like the Neuse River. This is the Neuse
5 River over here. And I'm going to start going up,
6 getting closer to the site. This first map
7 basically shows Crabtree Creek. And the places
8 where we collected samples, I don't know if maybe
9 the people in the back can see that, but all those
10 samples points show non-detect PCBs in the
11 sediments.

12 The next figure is going to move further up
13 gradient for Crabtree Creek and is going to get
14 into Lake Crabtree. When we look at Lake Crabtree
15 here, we collected a lot of sediment samples from
16 the lake. This sample over here is the highest,
17 the highest level that we detected at the lake and
18 it's .48 parts per million. And can you see those
19 numbers in the back? Should I make it bigger?
20 Point 48 is the highest number. There is a bunch
21 of non-detects.

22 We got here .18, .12. As we move further up
23 into Brier Creek, Brier Creek is over here. This
24 that we see over here is the down gradient part of
25 Brier Creek Reservoir. We got on Brier Creek a

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1 non-detect, .28. And as we move further into Brier
2 Creek reservoir, .11, .094. So, as you see, a lot
3 of the sediments are -- the concentrations are,
4 like I said, relatively low. They're low enough
5 for human exposure, but they might not be low
6 enough for ecological receptors and that's where it
7 becomes a bigger concern is the ecological
8 receptors and the fish. But in terms of human
9 exposure, they're relatively low. Actually, they
10 are low.

11 As we keep moving further up, these three
12 squares here are Reach D, C and B and my next
13 figure is going to give us a closeup of Reach D.
14 Let's see if I can make it a little bigger. Not
15 big enough. As we go up, .38, .11, .029. This is
16 Reach D. This is where we have the highest
17 sediment concentration in the whole Operable Unit
18 1, which is this point SD-32 with 4.2 parts per
19 million PCBs. As we keep going up, .023.

20 The next figure will be Reach C and here they
21 are higher than one part per million, also 1.9 --
22 I'm sorry, 1.3, .043, but in general, they are
23 below one. There is some hits above one,
24 especially in the reaches as we get closer to the
25 site.

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1 Reach C and Reach B, which is where Operable
2 Unit 1 starts, .93, there is a .26 here, .31, .36,
3 2.1. So those are sediment concentrations, PCBs in
4 sediments that were detected in the Operable Unit 1
5 area.

6 In addition to sediments, we also collected
7 fish samples, like I said. And we used those
8 samples to determine ecological risk and human
9 health risk due to ingestion of fish. All those
10 samples were sent to the State for them to review
11 and they did calculations and issued fish
12 advisories that are in place right now. The fish
13 advisories are for Little Brier Creek, Brier Creek
14 Reservoir, Lake Crabtree and Crabtree Creek. For
15 the Little Brier Creek and all the way to Brier
16 Creek Reservoir, they are for no consumption of
17 fish. The down gradient at Lake Crabtree and down
18 gradient they are for limited consumption, no more
19 than one meal a month. EPA, the State and Wake
20 County have worked together and all those areas are
21 posted with signs showing advisories.

22 So let me talk now about what are the
23 objectives or the goals that we're trying to
24 achieve with this proposed plan. The first goal
25 will be to eliminate or minimize any potential

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1 risks to human health or the environment due to
2 consumption of contaminated fish from some of these
3 areas by reducing PCB concentrations in fish to
4 regulatory or risk-based levels. Basically, what
5 action can we take so that we can get
6 concentrations in fish low enough so that we don't
7 have to have fish advisories. That will be the
8 first objective.

9 The second objective would be eliminate or
10 minimize any potential risks to human health or the
11 environment due to direct contact with contaminated
12 sediments in Reaches B, C, D, Lower Brier Creek by
13 reducing PCB concentrations in sediments to
14 regulatory or risk-based levels. That is what I
15 said earlier that the risk assessment shows that
16 one part per million is a level that shows as a
17 clean-up goal for preventing human exposure from
18 direct contact to contaminated sediment.

19 And the third objective will be minimize any
20 potential downstream migration of PCB contaminated
21 sediments. So those are the objectives and then we
22 developed alternatives to try to address those
23 objectives.

24 The first alternative that was developed is a
25 no action alternative. Basically assumes no

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1 action. It doesn't even assume that there are fish
2 advisories in place. This no action alternative is
3 like a baseline alternative.. It's an alternative
4 that the Superfund law requires that we evaluate.
5 So that serves as a comparison with all the other
6 alternatives. The only thing that is going to be
7 done in this alternative is to conduct a five-year
8 review. Five-year review is a review that EPA
9 needs to conduct as part of the Superfund law also
10 when contamination is left on site. So if there is
11 no action, the determination is, you know, it's
12 going to be left on site. So we're going to have
13 to do reviews every five years. And then the
14 estimated cost is \$332,000. And that's the cost of
15 the five-year review every five years for 30 years.

16 The second alternative is institutional
17 controls. Institutional controls will include
18 continue the existing North Carolina fish
19 consumption advisories and signs, together with
20 educational and community outreach program to
21 inform the community about the fish advisories and
22 give them all that information. It also includes
23 the five-year review. And the estimated cost for
24 that alternative is \$476,000.

25 Alternative 3 includes the same institutional

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1 controls that the previous alternative did,
2 Alternative 2, but in addition this alternative
3 includes a very important component that
4 Alternative 2 did not have, which was monitor
5 natural recovery. Monitor natural recovery will
6 consist of monitoring sediments and fish to get an
7 understanding of how nature is taking care of that
8 contamination and is preventing for the
9 contamination to be available for the ecological
10 receptors. I guess this alternative assumes that
11 because the main source of the contamination, which
12 is the Ward Transformer facility and Reach A, have
13 been cleaned up and they're going to be cleaned up,
14 this alternative assumes that eventually, probably
15 in a long period of time, nature is going to take
16 care of that low level contamination that is in
17 place now and it's going to be remediated by
18 itself. The estimated cost of that alternative is
19 \$2,247,000.

20 Alternative 4 -- there are five alternatives
21 by the way, so just one more after this one.
22 Alternative 4 has the same components of
23 Alternative 3, but in addition the same components,
24 the fish advisories, the community outreach
25 programs, five-year reviews and monitor natural

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1 attenuation, but in addition it includes excavation
2 on Reaches B, C, D and Lower Brier Creek. And what
3 that does is that those were -- especially B, C and
4 D were the reaches that had contamination above one
5 part per million. So by excavating those and
6 taking out the sediments with above one part per
7 million, we will expedite -- that could be
8 considered a minor source than the Ward Transformer
9 facility and Reach A. And by excavating those and
10 removing those from there, it will expedite the
11 natural recovery of all the other areas.

12 Based on modeling that has been conducted, if
13 those reaches are excavated, we believe that Brier
14 Creek Reservoir, that the fish in Brier Creek
15 Reservoir will achieve a clean-up goal that will
16 allow the State and EPA to remove the fish
17 advisories. And for Lake Crabtree it will take
18 about nine years for the fish to reach PCB
19 concentrations that will be low enough that will
20 not require fish advisories. The estimated cost
21 for this alternative is \$4,989,000.

22 Alternative 5 includes all the components of
23 Alternative 4, but in addition -- oh, I forgot to
24 mention -- can we go back to Alternative 4? I
25 forgot to mention that before the excavation of

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1 Reaches B, C, D and Lower Brier Creek, there is
2 going to be -- we're going to have to conduct
3 sampling to define what are the areas that need to
4 be excavated, where the sediments with
5 concentrations above one part per million are. And
6 also we're going to have to do an endangered
7 mussels study to determine if there are endangered
8 mussels in that area.

9 So Alternative 5 includes everything, all the
10 components that Alternative 4 has and in addition
11 it has dredging or excavation of sediments in Brier
12 Creek Reservoir and Lake Crabtree. This will be a
13 very complicated alternative. At this point we can
14 not say if those sediments will be dredged or
15 excavated dry. I guess the difference between
16 dredging and excavation is one is dry, the other
17 one is done wet. We would have to conduct
18 additional studies to determine if any of those is
19 appropriate for the specific conditions of those
20 areas.

21 Let's say that excavation is not -- is not
22 feasible. Dredging, you know, it's also pretty
23 complicated. And in this case that we have really
24 low concentrations already in this area, Brier
25 Creek Reservoir, Lake Crabtree, it will be very

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1 difficult to determine success that we will get the
2 specific areas that need to be excavated. It will
3 be a very complicated operation.

4 So after all that excavation is done, there
5 will be a site and stream restoration. This
6 alternative estimates that the fish in these areas
7 will achieve the levels for -- the levels that
8 there is not going to be any need for fish
9 advisories 12 years in the Brier Creek Reservoir
10 and eight years in Lake Crabtree.

11 If we go back one slide, Alternative 4 was for
12 14 for Brier Creek Reservoir and nine for Lake
13 Crabtree. So this alternative, based on the
14 modeling, shows one year more for Lake Crabtree and
15 two years more for Brier Creek Reservoir than
16 Alternative 5. But, of course, Alternative 5 will
17 take a lot of planning and coordination between
18 many agencies, the county, a lot of agencies. So
19 the planning will -- could take a lot longer than
20 Alternative 4.

21 The estimated cost for this alternative is
22 \$540 million -- almost \$541 million. This is an
23 estimate, you know. That cost most likely will
24 change after some of the studies that I mentioned
25 are conducted and some of the decisions are made.

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1 Those decisions would be made -- if this
2 alternative is selected, those decisions would be
3 made in the remedial design, which would be after
4 the regular decision. Five hundred and
5 forty million dollars.

6 After we develop those alternatives, we use
7 the Superfund evaluation criteria, which basically
8 takes every alternative and looks at all these nine
9 points. Overall protectiveness of human health and
10 the environment. Does the alternative protect
11 human health and the environment? Does it comply
12 with appropriate regulations? Is it effective in
13 the long-term? Is it permanent? Does it achieve
14 reduction of the toxicity, mobility or volume using
15 treatment? Is it effective in the short term? Is
16 it possible to be implemented? The cost, State
17 acceptance and community acceptance.

18 I'm not going to go into the specific
19 evaluation of this alternative, but the proposed
20 plan basically -- which we mailed to the people in
21 the mailing list and there is also copies outside
22 at the table in front of the room -- basically has
23 a summary of that evaluation of each alternative on
24 page eight and on. And this is, again, this
25 proposed plan is a summary. The feasibility study

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1 report includes the whole -- all the information
2 regarding this evaluation. And that report is also
3 available in the information repository at the
4 North Raleigh library.

5 So based on the information that we have at
6 this time, EPA and the State of North Carolina
7 believe that Alternative 4 provides the best
8 balance and trade-off of all the alternatives with
9 respect to the criteria that we have to look at.
10 And that's the criteria that is explained in the
11 proposed plan and the FS. So EPA is proposing
12 Alternative 4 as the proposed plan to be used to
13 clean up contamination at Operable Unit 1 for the
14 Ward Transformer Site. Like I mentioned, the
15 estimated cost is \$4,989,000. We believe that we
16 can achieve levels in the fish in Brier Creek
17 Reservoir in nine years -- I'm sorry, in Lake
18 Crabtree in nine years and Brier Creek Reservoir in
19 14 years.

20 So what's to expect next? Tonight we
21 presented the proposed plan that's the preferred
22 alternative that EPA is proposing. It is the
23 alternative that is out for comment period -- for
24 comments during this comment period, together with
25 all the other documents that are housed in the

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1 information repository. I mentioned the RI and the
2 FS, but there are a lot of other documents there.
3 You're welcome to visit the library and look at
4 those and send comments.

5 As Angela mentioned, the comment period was
6 extended and now ends October 4th. We encourage
7 everybody to send comments. After those comments
8 are received, together with the comments that we
9 get here tonight, we'll put together a
10 responsiveness summary with comments or questions
11 and answers. After those comments are received and
12 evaluated, we use the responsiveness summary to
13 evaluate community acceptance.

14 If the agency believes that there is community
15 acceptance to this plan, we'll move forward and
16 issue the record of decision. The record of
17 decision is the document that will describe what
18 the proposed clean-up action that we want to take
19 at this site, specifically for Operable Unit 1.
20 There will be a record of decision for Operable
21 Unit 1. And after that we will start negotiation
22 with potentially responsible parties to see if they
23 will get into an agreement with EPA to implement
24 this plan and do this clean-up and pay for it.

25 After the agreement is reached, if an

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1 agreement is reached, we start the remedial design.
2 If there is an agreement, the PRPs will do the
3 design with EPA and the State and other agencies'
4 oversight. And, of course, they will require to
5 have approval. And then the action, the clean-up
6 action will be implemented after that.

7 Questions?

8 MR. JENKINS: Hello, my name is Matt Jenkins.
9 I'm with the Triangle Off-Road Cyclists. I have
10 two questions for you. The first one is the one
11 part per million. You mentioned that that's
12 acceptable for human exposure to the sediment. But
13 for what level exposure? Is that daily or weekly
14 exposure or would that be a yearly exposure?

15 MR. FLORES: That is, actually, the ten to
16 minus six number is actually a little higher than
17 one. That would be --

18 MR. YOUNG: Generally, one PPM is generally
19 protective of even a residential-type exposure
20 where you have daily contact with sediment. A
21 typical number used in soil clean-up, pretty well
22 established, it would be far and above any type of
23 reasonable upper bounds exposure that you would
24 receive, even in say a reed gatherer or something
25 like that.

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1 MR. JENKINS: Thank you.

2 MR. FLORES: He's Charlie Young. He's with
3 Weston Solutions. He helped putting together the
4 risk assessment and some other documents.

5 MR. JENKINS: Thank you. My second question
6 is with Alternative 5. What would be the impact to
7 recreation at Lake Crabtree Park and downstream
8 areas?

9 MR. FLORES: Yeah, I guess that level of
10 detail really have not been looked at. Those are
11 the things that we will look at during the remedial
12 design. But you can imagine that it will be a lot
13 of disruption to whatever activities that go on at
14 the park. And not only the park, just the areas
15 around it. I mean, this is -- it will be a big, a
16 big -- there will be a lot of activity going on
17 there. So yeah, it would disrupt pretty much the
18 whole area.

19 MR. JENKINS: Thank you.

20 MS. ROBERTSON: I'm Deborah Robertson. And I
21 had a question about the monitoring natural
22 recovery. It said in the alternatives that have
23 that in there it said that there is a periodic
24 monitoring of the sediments. What does that mean?
25 Does that mean yearly or every five years with the

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1 plan?

2 MR. FLORES: Yeah, I guess the details of that
3 will also be part of the remedial design. I guess
4 I would say that probably we will do yearly.

5 MR. MORAN: As I understand, yearly.

6 MR. FLORES: Yeah, yearly. Of course, to be
7 refined, you know, as needed depending on what, you
8 know, maybe for the first certain number of years
9 will be done with certain frequency. And then
10 depending on what we see, you know, it can change.

11 MR. deFUR: My name is Peter deFur. I'm the
12 technical advisor for the Neuse Riverkeeper on this
13 project and I have several questions. One of them
14 has to do with a couple of alternatives that
15 weren't discussed. One of them being treatment of
16 the sediments in place, referred to as in situ
17 treatment. There is some new technologies and new
18 procedures that have been developed recently and I
19 didn't see any discussion of those.

20 And then the other alternative would be a
21 hybrid between four and five or a consideration of
22 doing something active in terms of dredging or
23 excavation in Brier Creek Reservoir and not
24 Crabtree Lake.

25 MR. FLORES: Lake Crabtree, uh-huh.

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1 MR. deFUR: Could you comment on those before
2 I ask two other questions?

3 MR. FLORES: I guess the first, the first
4 question would be that we really didn't look into
5 any other -- any other alternative that looked into
6 in situ treatment. We didn't look into any other
7 alternative. I think that may be due to the size
8 of these creeks probably would be maybe just easier
9 to excavate. But yeah, we didn't look at
10 alternatives that considers that.

11 MR. deFUR: Okay. And I guess the same thing
12 goes for dredging Brier Creek Reservoir, but not
13 the lake?

14 MR. FLORES: Right. Well, we -- well, on
15 Alternative 4 we're looking at dredging about --
16 Alternative 4 we're looking at dredging or
17 excavating anything above one part per million and
18 the reservoir doesn't have anything above one part
19 per million.

20 MR. YOUNG: This is Charles Young from Weston.
21 I think one of the other considerations is that
22 Brier Creek Reservoir is a very limited fishery.
23 The intent of the remediation is one that's largely
24 driven with human risk associated with fish
25 consumption, ecological risk with respect to

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1 high-level Piciformes like bald eagles and so forth
2 is not considered to be a driving risk. And, in
3 fact, remediation might in fact cause more problems
4 with respect to affecting their breeding, habitat
5 and their foraging range in those two water bodies.

6 So given that Brier Creek Reservoir is a lot
7 more inaccessible with respect to fishing because
8 of its proximity to the airport, the ownership of
9 the land around that, the focus really in our minds
10 should be to achieving remedial goals for Lake
11 Crabtree because it is such a widely used
12 recreational resource.

13 MR. deFUR: Yeah, the other two questions, one
14 of them has to do with other contaminants. You
15 mentioned that there was some other contaminants
16 and the documentation gives a list of some of the
17 other contaminants that were identified. And I
18 assume, and I'll be checking this in the documents
19 in my review, that there is a one-to-one
20 correspondence between the occurrence of PCBs and
21 the other contaminants because you wouldn't want to
22 remove a PCB laden sediment and leave in place one
23 that's laden with dioxins or heavy metals?

24 MR. YOUNG: Charles Young once again. What we
25 found, and you'll probably see this in your review

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1 of the RI documentation, that the concentrations of
2 PCB congeners and dioxins were essentially
3 co-located, which is not surprising in that they
4 would both have the same affinity for absorption of
5 fine sediments and would be expected to be found if
6 they derived from the same source, i.e. the Ward
7 Transformer facility. So, in essence, going after
8 the PCB laden sediment, it would be expected to
9 pull the dioxins out. Metals did not pose a
10 significant risk to either human or ecological
11 receptors.

12 MR. deFUR: I have one more question that has
13 to do with monitored natural recovery. I only had
14 a brief period to look at the feasibility study.
15 There isn't a lot of documentation on the
16 effectiveness of monitored natural recovery in
17 sites throughout the country. And my review of the
18 subject is that there isn't comprehensive
19 documentation for that procedure at any site around
20 the country. There is very limited description of
21 how well it works. And it depends upon either one
22 or both of two processes. One of them is
23 sedimentation that covers it up. So is there an
24 estimate that the sedimentation is sufficient to
25 cover it up, or some other biological process or

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1 physical process that's going to cause PCBs to
2 break down? I guess we're back to Charlie.

3 MR. YOUNG: In our evaluation, the modeling
4 that was done with respect to the time it would
5 take to achieve -- monitor the natural recovery was
6 predicated on only the sedimentation, the burial
7 and accounted for bioturbation and other physical
8 processes that would cycle some of the PCBs
9 currently in sediments up into the upper
10 biologically active sediment layer. We did not
11 take any credit for any reductions due to microbial
12 decay or weathering of PCBs in place.

13 MS. BACKUS: Hi, my name is Pat Backus. I've
14 worked a little bit with PCBs. In your
15 presentation you made a distinction between
16 dredging and excavation in the streams you're
17 talking about. During this excavating, are you
18 going to just reroute that for a while? How will
19 you determine when they're clean I guess?

20 MR. FLORES: The Alternative 4 considers
21 excavation --

22 MS. BACKUS: No, I mean three -- I'm sorry.

23 MR. FLORES: Dry excavation, rerouting the
24 sections of the streams and excavating dry.

25 MS. BACKUS: Also, when in relationship to the

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1 Operable Unit 2 will that be done? My concern is
2 that with my experience with them, you have a
3 potential of adding more into the system even
4 though you're doing the best you can in removing
5 them at the site.

6 MR. FLORES: You mean like what's going on
7 right now?

8 MS. BACKUS: Will that be finished by the
9 time --

10 MR. FLORES: I think by the time this kicks
11 in, that's going to be done.

12 MS. BACKUS: Okay. And just kind of on the
13 comment, I know that the degradation of PCBs by
14 degradation is a really slow process. And by even
15 just dredging them you're going to change the
16 environment so much that you're going to mess up
17 what's already in place.

18 MR. HUTCHINSON: Luis, can you tell us about
19 stream restoration, once you get through the
20 dredging whether that will be done in an
21 environmentally friendly way?

22 MR. FLORES: I guess the State of North
23 Carolina will regulate how that restoration is
24 conducted. And I guess there are a lot of
25 regulations depending on that area. And those

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1 areas will have specific regulations that will
2 dictate how those streams are restored.

3 MS. MILLER: Should have worn my Heelys.

4 MR. CADE: Drew Cade, I'm the park manager at
5 Lake Crabtree. Just a couple questions, Luis. You
6 mentioned kind of the nine-year target for natural
7 recovery at Lake Crabtree given option four. Are
8 there actual precedents to indicate that that's
9 more than just a model, that that's actually
10 happened in the past?

11 MR. FLORES: It's a model.

12 MR. CADE: And it's only a model?

13 MR. FLORES: It's a model.

14 MR. YOUNG: That's really what the monitored
15 natural recovery will be intended to achieve. By
16 taking a sampling, we'll be able to develop
17 real-world data in terms of declines in fish tissue
18 concentrations. The current model is based on a
19 site-specific bioaccumulation factor that accounts
20 for the concentrations in fish fillet tissue
21 relative to the sediment samples. So while it is
22 site specific, it's based on limited dataset and
23 only over time will you be able to actually see
24 that rate of decay.

25 MR. FLORES: The alternative, like all the

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1 alternatives, include the five-year review for the
2 alternative. The effectiveness of the alternative
3 gets looked at every five years. So we will look
4 at that data, you know, after the first five years,
5 we will look at all the available data and then
6 determine, okay, how is it working, is there
7 anything else that needs to be done and those kind
8 of things.

9 MR. CADE: My other question is in regard to
10 Lake Crabtree being a flood control device.
11 Obviously, that's our function. Recreational
12 aspect of the park, I feel like it's essential,
13 but, obviously, it was only a result of it being
14 created as flood control. Given that and the fact
15 that it is filling up with sediment, the county may
16 one day need to dredge the lake for increasing its
17 flood control volume. How will the EPA's plans fit
18 into that grand scheme?

19 MR. FLORES: I will say that there is going to
20 have to be some kind of coordination, but I guess
21 just given that the concentrations in the sediments
22 are not -- I mean, they're not by any means
23 considered hazardous waste because they're so low,
24 you know. There will have to be some kind of
25 coordination with EPA.

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1 MS. ALLEN: Hi, my name is Betsy Allen. I'm
2 concerned about the greater Raleigh area as a
3 native of Wake County and Raleigh. And I'm
4 concerned particularly about neighborhoods above
5 the Ward Transformer area, particularly the
6 Harrington Grove neighborhood. I have reason to --
7 I have anecdotal reason to believe that there are
8 children being born in that neighborhood with birth
9 defects and with a higher incidence of
10 malformations and a higher incidence of preterm
11 pregnancies being terminated early. Wondering
12 about have you all looked in that area? Is there a
13 possibility that the PCBs could just be lying
14 there? That's off of Barton Creek, which doesn't
15 really have a great tributary and doesn't feed like
16 Brier Creek, it doesn't feed into any reservoirs.
17 I'm just wondering could it be staying in the land?
18 Is that what might happen?

19 MR. FLORES: In relation to the contamination
20 for the Ward facility itself, which is what we were
21 looking at, you know, the way it got into all these
22 areas I guess the presumption is that it was
23 carried by runoff, you know, guiding to all of
24 these creeks and keep going down gradient.

25 MS. ALLEN: We remember the evidence of them

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1 dumping on roadways. And I'm wondering if there is
2 any kind of history in the newspapers or somewhere
3 where those locations could be relocated and looked
4 at for sampling of the sediments and so forth as a
5 potential hazard to human beings?

6 MR. FLORES: I guess I will suggest to maybe
7 make a recommendation to the State of North
8 Carolina to look at that. I don't know -- I mean,
9 at least as part of this specific remedy or
10 proposed plan or investigation, it basically is
11 looking at the facility itself and how contaminants
12 are moving from that facility. What Mr. Ward did
13 years ago when they sprayed the PCBs around the
14 counties in North Carolina, I don't have -- I don't
15 have information about that. I don't know.

16 MS. BACKUS: Pat Backus. If you wanted to
17 speak, it looked like you were edging that way. I
18 think it was in Wake County. I think Wake was one
19 of the counties if I remember correctly. And they
20 cleaned up to the one part per million and did an
21 awful lot of sampling there. So I don't see -- you
22 can look at the records and see that. But they
23 have every mile identified and there were thousands
24 of samples taken when they removed the soil.

25 MR. WINBERRY: Jerry Winberry with Envirotech

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1 Solutions. In your presentation you talked about
2 looking at protecting the environment and, of
3 course, the population with fish sampling and soil
4 sampling. Whenever you excavate, naturally you
5 have fluffing of soil into the air. The State of
6 North Carolina does have reference levels by which
7 PCBs are not to be exceeded. Within this program
8 then, is there a consideration to protect the
9 public against air emissions during this
10 remediation, both pre-remediation, during the
11 remediation and post-remediation?

12 MR. FLORES: Yeah, I would think those
13 decisions will be considered during the remedial
14 design, but it seems like every site that we do
15 excavation of PCBs, we also do some kind of air
16 monitoring.

17 MR. McLAWHORN: I'm Dan McLawhorn with the
18 City Attorney's Office in Raleigh. Looking at
19 Alternative 4 and understanding that you're talking
20 about dry-bed excavation of the streams, has there
21 been any consideration given to the City of
22 Raleigh's infrastructure that runs along and
23 parallel to those streams and whether or not it's
24 actually feasible to shift the bed to another
25 location for dry-bed excavation?

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1 MR. FLORES: We haven't really looked at that,
2 those kind of details. Again, that will be looked
3 at in more details in the design phase. I guess at
4 this point the way that the alternative -- the cost
5 was estimated was based on dry excavation. That's
6 not to say that it could change due to -- due to,
7 you know, additional information that we receive
8 during the remedial design like, you know, like
9 making it totally unfeasible to do it because of
10 the infrastructure.

11 MR. McLAWHORN: But I thought feasibility was
12 an issue you had to achieve when choosing an
13 alternative, not moving past that and then find a
14 block in the design phase?

15 MR. FLORES: I'm sorry, say that again.

16 MR. McLAWHORN: You had nine criteria up
17 there. Feasibility is one of them that you have to
18 answer in choosing the alternative. You can't
19 postpone that until design.

20 MR. FLORES: Implementability, yeah. There is
21 certainly going to be a lot of details that we
22 probably learn during the RD.

23 MR. CAMPBELL: I can respond to that in part.
24 I don't think what we contemplate would be
25 rerouting the streams. You misunderstand that.

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1 Another site we're cleaning up that you
2 probably aren't familiar with, but there is a site
3 called Chattanooga Creek up in Tennessee. It's a
4 larger stream than Brier Creek. And what we've
5 done there is we have built an earthen dam in the
6 stream and then pumped the water around the area
7 that's being excavated through a flexible line and
8 then move that down. So that's one way of doing
9 it. But I think the important thing to know is
10 that the decision is that we would remove the
11 sediments above that one part per million level
12 through either a dry excavation method or if it
13 turns out that it would be a more appropriate way
14 of doing a wet dredging, we could potentially do
15 that. So the main thing to understand is that we
16 would be going after the sediments that are above
17 the one part per million.

18 MR. MORAN: Chris Moran from Weston. When we
19 did the costing for the feasibility study, that's
20 exactly the technique that we costed.

21 MR. JOHNSON: Keith Johnson. Can you give us
22 any sense of what your cost may be beyond what
23 you've presented here? Your cost for the RI, FS,
24 through the broad stage, I assume you will be
25 seeking recovery of those costs from responsible

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1 parties. Presumably you're tracking them as you go
2 along. Based on other projects or what you have
3 incurred so far, are you able to give us any sense
4 of how much money that may be at that point in
5 time?

6 MR. FLORES: Yeah, I do not have that kind of
7 information. And every site is certainly
8 different. I guess we can get information on how
9 much cost has been spent to date, but in order to
10 determine how much cost will be spent, you know,
11 preparing the record of decision or doing
12 negotiations or with the PRPs, I wouldn't be able
13 to say.

14 MR. deFUR: This is Peter deFur again. Luis,
15 I wondered -- you referred to several alternatives
16 requiring a survey for freshwater mussels.

17 MR. FLORES: Right.

18 MR. deFUR: I would have thought that EPA
19 would have directed that to occur during the
20 ecological risk assessment phase. And if not then,
21 then is there any reason to wait on that? Why
22 shouldn't that proceed ahead immediately if it
23 hasn't been done? I'm not clear why it hasn't been
24 done already.

25 MR. YOUNG: Charles Young responding. It was

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1 a recommendation that came out of the ecological
2 risk assessment. While there was a survey of the
3 repairing area associated with the stream and there
4 was fish and crayfish collections from the reaches
5 of stream up above that, the potential presence of
6 mussel populations was a concern, but was not
7 determined by any formal survey. But the fact that
8 they have been present in this watershed means that
9 we felt that a professional malacologist should go
10 through and determine that.

11 It could potentially have impacts on the
12 dredging locations in that you might end up having
13 to avoid a spot in order to be able not to, you
14 know, damage an existing mussel population. It
15 would also mean that any changes in water flow,
16 turbidity levels associated with dredging
17 activities would need to be addressed in order not
18 to impact any populations there. So it's something
19 that would be expected to be a necessary component
20 prior to the completion of the remedial design, but
21 it hasn't been performed yet.

22 MR. deFUR: I guess for all those reasons is
23 why I'm wondering why EPA hasn't said go forth and
24 do?

25 The other question is that EPA is proposing

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1 here, and this feeds back on one of the other
2 questions about the sources, and source control is
3 a critical element in cleaning up any sort of site.
4 And I know that the nature of the specific source
5 at the Ward Transformer has changed in recent
6 years, so it turned out that the contamination is
7 deeper, for example. And it hadn't occurred to me
8 until this evening to wonder whether or not there
9 is a further upstream source. And there are ways
10 to look at it. You can do a cut and fill
11 evaluation with, you know, pictures over time.

12 So has that been done? And if not, how will
13 it affect the remediation when something turns out
14 to be different at the source? I mean, this being
15 a Superfund site, we can expect to find new things.

16 MR. FLORES: I didn't -- I didn't quite
17 understand it. So are you saying --

18 MR. deFUR: Are you sure that you've got the
19 source? Does there need to be a further source
20 control or source identification analysis?

21 MR. FLORES: I think we got the source.

22 MR. YOUNG: Pretty much at the head of the
23 watershed. It's right at the divide. You don't
24 see a potential --

25 MR. MORAN: Mount Herman Road is actually a

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1 divide for the watershed.

2 MR. deFUR: You're right.

3 MR. MORAN: There would be no -- they sampled
4 all the way up and even across Mount Herman Road.
5 So I'm not sure what your question is.

6 MR. deFUR: And there is no evidence that
7 there is groundwater coming in -- coming in through
8 groundwater up at the site itself?

9 MR. MORAN: There are concentrations in the
10 groundwater, but they're --

11 MR. YOUNG: Low in mass perspective.

12 MR. deFUR: They're low in the groundwater.
13 The final question may be one the State has the
14 answer to. That is whether or not the fish
15 consumption advisories are working?

16 MR. FLORES: I'm sorry?

17 MR. deFUR: Do you know if the fish
18 consumption advisories are working? And that might
19 be a question for the State.

20 MR. FLORES: We hope they are.

21 MR. deFUR: Is the State keeping an eye on
22 that?

23 MS. WILLIAMS: Yes. Drew, you want to come up
24 here too? Luanne Williams, a State toxicologist
25 for the North Carolina Department of Health and

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1 Human Services. I work for this gentleman here in
2 determining -- this is -- we've determined if
3 people are following advice or not. It's the State
4 Health Director's decision to issue advisories.
5 And, as you know, we have issued advisories from
6 Little Brier Creek, Brier Creek Reservoir, Brier
7 Creek, no consumption of any fish. And then Lake
8 Crabtree is no consumption of carp or cats, and a
9 meal a month for everything else. And then for
10 Crabtree Creek, the levels have gotten lower than
11 the Lake Crabtree levels. And so we issued an
12 advisory for carp, cats and large mouth bass of one
13 meal a month. So they are still elevated in the
14 carp and cats. And we have noticed that people --
15 most people follow advice, but then there were some
16 that you discovered that would take some cats home
17 at Lake Crabtree. I'll let Drew talk to you about
18 that.

19 MR. CADE: Fishing activity in general has
20 been reduced dramatically because of the signage,
21 the programs the park offers. There are still
22 certain populations that fish, you know, some of
23 the social trails, not the park proper. And so,
24 you know, our job is to make sure that the signs
25 are very effective. They have 30 of them around

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1 the lake itself. They are all bilingual. And I
2 think the message is finally getting out based on
3 the fact that, you know, I'm seeing much less
4 fishing, obviously, out there than we have in the
5 past. It's sad. I mean, I'd love to see it.

6 But the county incorporated the State
7 language, which was an advisory, into a county
8 policy of catch and release only. Due to the fact
9 that the task force noticed several people still
10 fishing in the lake and the surrounding waters, the
11 county felt like the appropriate step to properly
12 manage the situation with signs was to go ahead and
13 make it a catch and release only situation. We
14 incorporated the State language that Luanne came up
15 with, but the county policy in county-managed lands
16 is catch and release only.

17 So we have the enforcement capability. If we
18 see someone with a bucket of fish, they may not
19 like it, but I have the ability to dump that bucket
20 out into the water for their own protection.
21 That's a big step in this I think.

22 MS. WILLIAMS: Yes. The park management has
23 done a really good job of enforcing that and making
24 sure that the signs provide useful information that
25 people can understand what the message is.

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1 And, also, I would like to share with you that
2 through a grant through CDC Agency for Toxic
3 Substance and Disease Registry, the North Carolina
4 Department of Health has been able to obtain
5 additional fish tissue samples along tributaries,
6 other tributaries that flow into the Neuse River.
7 We did -- EPA helped us out like 30 miles
8 downstream from Ward. And we appreciate that. And
9 they collected fish tissue samples. And the
10 Division of Water Quality collected fish tissue
11 samples for us and EPA's lab in Atlanta analyzed
12 them, but we were still finding elevated levels
13 30 miles downstream from Ward. I'm not saying Ward
14 is responsible, but it was 30 miles downstream
15 where Crabtree Creek enters the Neuse. And we had
16 a few catfish, one bass and the levels were in
17 those fish at a point where we would issue a one
18 meal per month still. But, again, it was only two
19 cats and one large mouth bass where Crabtree Creek
20 enters the Neuse.

21 So I know we've got Neuse River folks here. I
22 wanted you to know about that. But two weeks ago
23 the Division of Water Quality collected more tissue
24 samples for us, bottom feeders, bass, sunfish along
25 Walnut Creek and Rocky Branch, which are

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1 tributaries that flow into the Neuse River. It's
2 about seven miles, for those of you that are
3 interested, to the Neuse. And so we selected those
4 locations because we had some reports provided to
5 us by the Division of Waste Management that there
6 may have been transformer facilities located along
7 those surface water bodies, Rocky Branch and Walnut
8 Creek.

9 So time will tell. In two weeks we should
10 have those fish sample results. And I will
11 certainly let folks in the Division of Waste
12 Management, Drew, the Riverkeeper Foundation and
13 others, I've got a long list of contacts, know what
14 we found. And we may be issuing more advisories,
15 but I don't know.

16 MR. JENKINS: If I could just ask a quick
17 follow up to that? Matt Jenkins again. I was
18 wondering if the costing for the alternatives
19 include the community outreach? Did that also
20 include increased funding for actual people to go
21 out and talk to the fishermen and explain the issue
22 to them? I know fishing may have decreased
23 dramatically, but I see people out there every time
24 I bike.

25 MR. FLORES: Yeah, the outreach programs will

A. WILLIAM ROBERTS, JR., & ASSOCIATES

1 be -- I guess we will develop those and come up
2 with different ideas, maybe look at other sites
3 where things have been done and they have been
4 effective and try to implement them here.

5 MR. JENKINS: Thank you.

6 MR. FLORES: Any other questions? All right.
7 Well, the comment period ends October 4th. So if
8 you think of other questions or have any additional
9 comments, please send those to me. My information
10 is in the back of that proposed plan fact sheet, my
11 e-mail and my telephone. So if you want to send an
12 e-mail or call, please feel welcome to. Thank you.

13 (Whereupon, at 8:16 p.m., the proceedings
14 concluded.)

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A. WILLIAM ROBERTS, JR., & ASSOCIATES

1 STATE OF NORTH CAROLINA)

2 COUNTY OF WAKE)

3 CERTIFICATE OF REPORTER

4 I, MAREN M. FAWCETT, Registered Professional
5 Report and Notary Public in and for the State of North
6 Carolina, duly commissioned and authorized to administer
7 oaths and to take and certify depositions, certify that
8 the foregoing is a true and correct transcript of said
9 proceedings to the best of my ability and understanding;
10 that I am not related to any of the parties to this
11 action; that I am not interested in the outcome of this
12 case; that I am not of counsel nor in the employ of any
13 of the parties to this action.

14 IN WITNESS WHEREOF, I have hereto set my hand,
15 this the 17th day of August, 2007.

16

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18



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Maren M. Fawcett, RPR
Notary Public - North Carolina
Certificate No.: 200621500068
My Commission Expires: 7/31/2011

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A. WILLIAM ROBERTS, JR., & ASSOCIATES



SUPERFUND PROPOSED PLAN FACT SHEET

**WARD TRANSFORMER SITE OPERABLE UNIT 1
RALEIGH, NORTH CAROLINA**

August 2007

INTRODUCTION

This Proposed Plan identifies the preferred alternative for remedial action at the Ward Transformer Site (the Site) Operable Unit 1 (OU1). OU1 deals with areas downgradient from the Ward Transformer facility.

The Proposed Plan presents EPA's recommendation concerning how best to address contamination at the Ward Transformer Site OU1. It presents the alternatives that were evaluated, and explains the reasons EPA recommends the preferred alternative. It solicits public review of and comment on all alternatives described, and provides information on how the public can be involved in the remedy selection process.

This document is issued by the U.S. Environmental Protection Agency (EPA), the lead agency for site activities, and the North Carolina Department of Environment and Natural Resources (NC DENR), the support agency. EPA, in consultation with the NC DENR, will select a final remedy for the Site after reviewing and considering all information submitted during the 30-day public comment period. The final remedy decision will be documented in a Record of Decision (ROD). A ROD is a public document that explains which cleanup alternative will be used at a Superfund site and the reasons for selecting the alternative.

DATES TO REMEMBER

PUBLIC COMMENT PERIOD:

August 6, 2007 to September 4, 2007

U.S. EPA will accept written and oral comments on this Proposed Plan during the public comment period.

PUBLIC MEETING:

August 14, 2007, 7:00 pm

U.S. EPA will hold a public meeting to explain this Proposed Plan and all of the alternatives considered. Oral and written comments will also be accepted at the meeting. The meeting will be held at:

Hilton North Raleigh
3415 Wake Forest Road
Raleigh, North Carolina, 27609-7330
Phone (919)-872-2323

For more information regarding the Site, see the Administrative Record at the following locations:

EPA Records Center	North Raleigh Library
61 Forsyth Street SW	7009 Harps Mill Road
Atlanta, GA 30303	Raleigh, NC 27615
(404)562-8946	(919) 870-4000

EPA, in consultation with the NC DENR, may modify the preferred alternative or select another response action presented in this Proposed Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund; Pub. L. No. 96-510), as amended at Pub. L. No. 99-499, and Sections 300.430(f)(2) and f(3) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). EPA relies on public input to ensure the concerns of the community are considered in the selection of an effective remedy for each Superfund site.

This Proposed Plan summarizes information that can be found in greater detail in the Remedial Investigation (RI) and Feasibility Study (FS) Reports and other documents contained in the Administrative Record file for this Site.

EPA and the NC DENR encourage the public to review these documents to gain a more comprehensive understanding of the Site and Superfund activities that have been conducted at the Site.

SITE BACKGROUND

The Ward Transformer Site is located along Mount Herman Road, in a predominantly industrial area of northwestern Raleigh, Wake County, NC. The Ward Transformer facility is located 600 feet (ft) south-southeast of the Northern Wake Expressway/Interstate-540 (I-540), 1,000 ft southwest of US highway 70, and is adjacent to property owned by the Raleigh-Durham International (RDU) Airport.

RDU Airport proper (i.e., terminals) is located approximately 2 miles south of the Site, with airport runways located less than 1 mile south.

The Ward Transformer facility is owned by Ward Transformer Company, Inc. The facility was built on approximately 11 acres of previously undeveloped land in 1964 and electrical transformers were built, repaired, sold, and reconditioned at the Site until around 2005. As a result of Ward's operations, polychlorinated biphenyls (PCBs) were released into the environment. An EPA-lead phased remedial investigation was conducted from April 2003 to April 2007. As part of the investigation, soil, sediment, surface water, groundwater, and fish samples were collected. The investigation covered the facility property and surrounding properties, together with more than 30 miles of waterways including unnamed tributaries to Little Brier Creek (Reach A, B and C), Little Brier Creek (Reach D), Brier Creek Reservoir, Brier Creek, Lake Crabtree and some tributaries, Crabtree Creek and some tributaries, and a 0.5 mile segment of the Neuse River (See attached figure 1-5).

In September 2005, EPA signed an Administrative Settlement Agreement and Order on Consent with a group of potentially responsible parties (PRPs) to implement a removal action. The removal action is underway and includes contaminated soil/sediment removal at the Ward Transformer facility and some immediate surrounding areas, including Reach A.

Operable Unit 1, the subject of this proposed plan, includes Reaches B, C and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and Crabtree Creek. These areas are all downgradient from Reach A and the facility.

Community Relation Activities

The Ward Transformer Superfund Site was included on the National Priorities List (NPL) or Superfund list in April 2003. EPA has conducted community relations activities to inform and involve the community about site activities. Community relations activities conducted include mailing information fact sheets and e-mails, press releases, availability sessions, sampling plans development meeting, presentations and public meetings. The following is a summary of community meetings conducted in Raleigh:

Event	Date
Remedial Investigation (RI) "Kick-off" Public meeting	March 13, 2003
RI findings meeting	November 16, 2004
Task Force Presentation	August 4, 2005
Sampling Plan Development meeting	October 27, 2005
Public Availability Session	January 19, 2006
Public Meeting	June 21, 2006
Public Availability Session	March 17, 2007

Study Area Characteristics

For the purpose of this Proposed Plan, the study area begins with Reach B. Reach A and the Ward facility are being addressed under a removal action and, as a result, these areas are not discussed in this Proposed Plan.

The Study Area included:

Surface Water Body		Length of Reach (miles)
Unnamed Tributary to Little Brier Creek	Reach B	0.3
	Reach C	0.4
Little Brier Creek proper	Reach D	0.8
Brier Creek Reservoir		1.7
Brier Creek		1.8
Lake Crabtree Tributaries include Stirrup Iron Creek, Upper Crabtree Creek, Black Creek, and Haleys Branch		1.5
Crabtree Creek (entire watershed) Tributaries include Reedy Creek, Sycamore Creek, Turkey Creek, Haresnipe Creek, Richland Creek, Mine Creek, Beaverdam Creek, Big Branch, Pigeon House, and Marsh Creek		21.5
Neuse River		0.5

Summary of RI Findings

An EPA-lead Remedial Investigation (RI) was conducted from April 2003 to April 2007. As part of the investigation, soil, sediment, surface water, groundwater, and fish samples were collected. The following is a summary of the findings of the investigation for OU1. For more specific details, please refer to the Remedial Investigation report located in the information repository.

Sediments/Soil

PCBs were detected above the 1 mg/kg level in at least one sediment sample collected from Reaches B, C and D. Sediment samples collected downgradient from each of Reach D did not exceed 1 mg/kg. The following list summarizes the sediment results for PCB analyses for Reach B and areas downgradient:

Location	Number of Samples	Max PCB Aroclor concentration mg/kg
Reach B	20	3.0
Reach C	18	2.6
Reach D	13	4.2
Brier Creek Reservoir	6	0.31
Brier Creek	2	0.28
Lake Crabtree	20	0.48
Crabtree Creek	13	Not detected
Neuse River	1	Not detected

Soil samples collected downgradient from Reach A did not exceed 1 mg/kg.

Fish Tissue

Whole body fish samples were collected and analyzed to assess ecological risks, and fish filet tissue samples were prepared and analyzed to assess human health risks.

The following are fish action levels recommended by the State of North Carolina:

PCB concentration	NC Recommendation
<0.05 mg/kg	Unlimited consumption
0.05–0.10 mg/kg	One meal per week.
0.10–0.50 mg/kg	One meal per month
>0.5	Do not eat

Based on the analytical results of the fish tissue samples and the above-mentioned action levels, the State of North Carolina Department of Health and Human Services issued fish consumption advisories for Little Brier Creek (downstream of Brier Creek Parkway), Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek. The Little Brier Creek and Brier Creek Reservoir fish consumption advisory

recommends that fish should not be consumed. The Lake Crabtree advisory recommends that catfish and carp should not be eaten and that no more than one meal per month of other fish species should be eaten. The advisory for Crabtree Creek recommends that consumption of carp, catfish, and largemouth bass be limited to no more than one meal per month.

Fish tissue data from Crabtree Creek shows PCBs in fish below Lake Crabtree. Although the sediment samples from Crabtree Creek did not contain detectable concentrations of PCBs, their presence in fish samples indicates uptake and bioaccumulation of PCBs via the food chain.

EPA, the State of North Carolina, and Wake County have posted signs for the areas subjected to the fish advisories.

Lake Crabtree Soil and Surface Water Samples

Soil samples were collected at recreational areas around Lake Crabtree and at the Cedar Fork athletic fields. No PCBs were detected in any of the samples collected.

Surface water samples were collected at Lake Crabtree. No PCBs were detected in any of the samples collected.

SCOPE AND ROLE OF RESPONSE ACTION

The Ward Transformer Site has been divided in two areas for remediation purposes:

Operable Unit 1 (OU1) – This operable unit is the subject of this Proposed Plan. It includes the following areas downgradient from the Ward Transformer facility: Reaches B, C and

D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and Lower Crabtree Creek.

Removal Action Area – the area undergoing the removal action includes the Ward Transformer Facility and immediate surrounding areas including Reach A.

Operable Unit 2 (OU2) – OU2 will include the final remedy for the areas subjected to the ongoing removal action, and any groundwater issues.

REMEDIAL ACTION OBJECTIVES FOR OU1

The Remedial Action Objectives for OU1 include:

Eliminate or minimize any potential risks to human health or the environment due to consumption of contaminated fish from Brier Creek, Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek, by reducing PCB concentrations in fish to regulatory or risk-based levels.

Eliminate or minimize any potential risks to human health or the environment due to direct contact with contaminated sediments in Reaches B, C, and D, and lower Brier Creek by reducing PCB concentrations in sediments to regulatory or risk-based levels.

Minimize any potential downstream migration of PCB-contaminated sediments.

SUMMARY OF RISKS ASSESSMENTS

Risk assessments were conducted to determine the potential risk of any current and future exposure of human and ecological receptors to contaminants. Provided below are the main conclusions of the risk assessments. For more

specific details, please refer to the risk assessments included in the Remedial Investigation report located in the information repository.

Human Health Risk Assessment

Based on the results of the human health risk assessment, the main risks associated with contaminants at the Operable Unit 1 study area are due to human consumption of contaminated fish; and the potential exposure to sediments with PCB concentrations above 1 mg/kg.

Ecological Risk Assessment

Based on the results of the ecological risk assessment, the main risk associated with contaminants at the Operable Unit 1 study area is due to ecological receptor exposure to contaminated fish.

REMEDIAL ALTERNATIVES

The following Remedial Alternatives were developed and documented in the Feasibility Study for the Site.

Alternative 1 – No Action

- Assumes no action to be taken.
- Conduct five-year reviews.

The No Action alternative is evaluated as required by law to serve as a baseline for other alternatives. Under the No Action alternative, no remedial actions would be implemented at the Site. The existing site conditions would continue to remain in place without any active remediation technologies or institutional controls. Risks posed by PCBs under hypothetical future scenarios would likely remain for an extended period of time. Any

contaminant reduction would be due to naturally occurring processes.

Although the State of North Carolina has already issued fish consumption advisories and EPA, the State of North Carolina and Wake County have fish consumption signs already in place, for the purpose of this evaluation, it is assumed that the fish advisories and signs are not part of the No Action alternative. The No Action alternative would only include a review of the remedy every 5 years for 30 years (five year reviews).

Alternative 2 - Institutional Controls

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- Conduct five-year reviews.

Under this alternative, North Carolina fish consumption advisories and signs would continue to remain in effect. Additionally, community outreach and public educational programs would also be conducted to inform the public of the fish consumption advisories and signs. The continued implementation of fish advisories and signs would reduce the potential risks to humans through fish consumption. Fish advisories and signs would remain in place until such time as the PCB concentrations in aquatic biota decline to less than 0.05 mg/kg. Because this alternative does not include any monitoring of PCB levels, attainment of these levels will not be known. Five-year reviews will also be conducted as required by CERCLA.

Alternative 3 - Monitored Natural Recovery (MNR) and Institutional Controls

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- MNR; periodic monitoring of sediments and aquatic biota.
- Conduct five-year reviews.

MNR is a remedy for contaminated media that typically uses a wide range of ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in media, thereby reducing any potential risk to human and/or ecological receptors. MNR is especially suitable for a Site such as this where the main source of contamination will be removed (Ongoing Removal Action at Reach A and the Ward Transformer facility).

Current levels of PCBs in sediment samples within OU1 are low enough that continued burial, dispersion, and mixing-in-place of sediments alone would reduce the PCB concentrations significantly even without the destruction or transformation of PCBs.

MNR would involve the periodic monitoring of sediments which would enable assessment of variations in PCB concentrations in sediments over time. In addition, monitoring of aquatic biota (fish sampling) would support decisions for continuance and/or justify modifications to existing North Carolina fish consumption advisories and signs.

Like Alternative 2, Alternative 3 includes the continuance of the North Carolina fish consumption advisory and signs, the educational and community outreach programs, and the 5 year reviews.

Alternative 4 - Excavation and Off-Site Disposal of Sediments in Reaches B, C, D,

and Lower Brier Creek; MNR in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; and Institutional Controls

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- Conduct pre-excavation sampling and endangered mussel study.
- Excavate sediments in Reaches B, C, D and lower Brier Creek, and transport sediments off-site for appropriate disposal.
- Site and stream restoration.
- MNR; periodic monitoring of sediments and aquatic biota.
- Conduct Five-year review.

Under this alternative, a pre-excavation sediment sampling program will be implemented. This sampling program will be conducted to more accurately define the limits of excavation areas in Reaches B, C, D, and lower Brier Creek.

A mussel survey will also be conducted to determine if threatened/endangered mussel species are present in the areas selected for excavation.

Based on the results of the pre-excavation sampling program, sediments with PCB concentrations above 1 mg/kg will be excavated from Reaches B, C, D, and lower Brier Creek. Sediments will be disposed off-site in an appropriate landfill. Stream restoration would be performed once the contaminated sediments are removed.

Like Alternative 3, Alternative 4 includes periodic monitoring of sediments and aquatic biota (fish sampling) associated with MNR, the continuance of the North Carolina fish consumption advisory and signs, educational

and community outreach programs, and the 5 year reviews.

Alternative 5 - Excavation of Sediments in Reaches B, C, D, and Lower Brier Creek; Excavation/Dredging of Sediments in Brier Creek Reservoir and Lake Crabtree; Off-Site Disposal of Sediments; MNR in Lower Crabtree Creek and Institutional Controls

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- Conduct pre-excavation sampling and endangered mussel study.
- Excavate sediments in Reaches B, C, D, and lower Brier Creek, and transport sediments off-site for appropriate disposal.
- Dredge or excavate sediments in Brier Creek Reservoir and Lake Crabtree, and transport sediments off-site for appropriate disposal.
- Site and stream restoration
- MNR; periodic monitoring of sediments and aquatic biota.
- Conduct Five-year review.

Like Alternative 4, Alternative 5 includes excavation of sediments from Reaches B, C, D, and lower Brier Creek, periodic monitoring of sediments and aquatic biota (fish sampling) associated with MNR, the continuance of the North Carolina fish consumption advisory and signs, educational and community outreach programs, and the 5 year reviews.

In addition, sediments in the Brier Creek Reservoir and Lake Crabtree will be dredged or excavated and transported off-site for disposal. The choice of dredging or excavation technologies to be implemented in the Lake and the Reservoir will be determined in the remedial design phase.

PCB levels detected in Brier Creek Reservoir and Lake Crabtree are already in the low part per million (ppm) ranges. Therefore, for the purpose of this alternative, it is assumed that all of the sediments in Brier Creek Reservoir and Lake Crabtree would have to be removed to ensure that the availability of very low PCB levels is completely eliminated for ecological receptors.

Excavated/dredged areas will be restored once the sediments are removed.

COMPARATIVE ANALYSIS OF ALTERNATIVES

The alternatives were compared to one another using various criteria and guidelines. The comparative analysis considered potential positive, negative, or neutral aspects of the various alternatives. EPA has also developed factors or principles specifically for sediment sites such as this Site. Consideration of these principles and more specific details about the nine criteria evaluation can be found in the Feasibility Study (FS) report located in the information repository. The nine evaluation criteria are discussed below.

Evaluation Criteria for Superfund Remedial Alternatives
Overall Protectiveness of Human Health and the Environment
Compliance with ARARs
Long-term Effectiveness and Permanence
Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment
Short-term Effectiveness
Implementability
Cost

State Acceptance

Community Acceptance

Overall Protection of Human Health and the Environment determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.

Alternative 1 would not be protective of human health or the environment because there are no actions associated with this alternative.

Alternative 2 and 3 will be more protective than Alternative 1 because of the fish advisories and signs, and the educational and community outreach programs to inform the public about the fish consumption advisories and the risks of consuming PCB-contaminated fish.

Alternatives 1 and 2 may eventually achieve clean up goals, but without monitoring, it would not be possible to determine when those goals are reached. Alternative 3 may also eventually achieve clean up goals, and the monitoring program will document achievement.

Alternatives 4 and 5 are more protective of the human health and the environment than Alternative 3, because these alternatives remove contaminated sediments with concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek, therefore limiting any potential exposure to sediments above this level. Modeling results show that excavating sediments with PCB concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek will accelerate the natural recovery processes in sediments at Brier Creek

Reservoir and Lake Crabtree. Therefore, in Alternative 4, PCB levels in sediments in Brier Creek Reservoir and Lake Crabtree would gradually decrease through natural processes at a much faster pace than in Alternative 3. As a result, PCB concentrations in fish would also gradually decrease to levels below the threshold for fish consumption advisories and signs.

In addition to sediment removal from the streams, Alternative 5 would also remove sediments in Brier Creek Reservoir and Lake Crabtree. As a result, the time required to achieve acceptable fish tissue PCB concentrations after completion activities may be less than the timeframe required in Alternative 4. However, due to the complexity of Alternative 5, the total time required for planning, design and implementation of this alternative would be considerable greater than Alternative 4.

With regards to protection of the environment, Alternative 3 may take a long time to achieve clean up goals. Alternatives 4 and 5 will achieve clean up goals in a shorter period of time than Alternative 3, but would destroy/disturb the habitat and aquatic biota in segments of the remediated streams. Therefore, the benefits of removing sediments must be weighed against the disruption or destruction of aquatic and biota habitats in and around the streams.

In addition, the large-scale excavation/dredging operations in Brier Creek Reservoir and Lake Crabtree in Alternative 5 will disturb or destroy benthic and other aquatic biota and habitats in the reservoir and the lake. The dredging/excavation activities of Alternative 5 could also adversely impact threatened bald eagles within the reservoir and lake areas for foraging and breeding. Thus, for

Alternative 5, the benefits of removing sediments from the reservoir and the lake must be weighed against the disruption or destruction of aquatic and avian biota and habitats during excavation/dredging.

Compliance with ARARs evaluates whether the alternative meets Federal and State environmental statutes, regulations, and other requirements that pertain to the site. (ARARs = Applicable or Relevant and Appropriate Requirements)

Chemical-specific ARARs may not be met in Alternatives 1 and 2. Because monitoring is not included as part of these alternatives, achieving cleanup goals would be unknown.

In Alternative 3, the chemical-specific ARAR of 1 mg/kg for PCBs may be met in the long-term for sediments in Reaches B, C, D, and lower Brier Creek through natural recovery processes. In Alternatives 4 and 5, chemical-specific ARARs of 1 mg/kg for sediments in Reaches B, C, D and lower Brier Creek will be met after excavation activities are completed.

Action-specific ARARs are not relevant for Alternatives 1, 2, and 3 because there are no active remedial actions associated with these alternatives. In Alternatives 4 and 5, all applicable action-specific ARARs would be met during the remedial actions. Measures will be taken to minimize any dust during excavation activities. In addition, for Alternative 5, any NPDES permit requirements will be met, if water from dewatering operations requires treatment prior to being discharged.

Location-specific ARARs are not relevant for Alternatives 1, 2, and 3 because there are no active remedial actions associated with these alternatives. In Alternatives 4 and 5, applicable

location-specific ARARs would be met. Precautions will be taken to minimize any impact on identified local endangered and threatened species. Also, activities will be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks (Umstead Park), construction, and erosion and sediment control.

Long-term Effectiveness and Permanence considers the ability of an alternative to maintain protection of human health and the environment over time.

Alternative 1 does not offer protection to human health or the environment in the short or long-term basis. In Alternatives 2, 3, 4 and 5, potential risks associated with fish consumption are expected to be lower because of the fish consumption advisories and signs.

Due to the absence of monitoring programs in Alternatives 1 and 2, the long-term reduction of risks would not be known. Also, without monitoring, the continuing need for Institutional Controls in Alternative 2 could not be evaluated.

In Alternative 3, risks to humans and the environment are expected to gradually decrease over time with the reduction of PCB concentrations in sediment through natural processes and will be documented by a long term monitoring program. PCB concentrations in fish are expected to decline with the decrease of PCB concentrations in sediment.

In Alternatives 4 and 5, the removal of sediments to levels below 1 mg/kg PCB from Reaches B, C, D, and lower Brier Creek will reduce any potential risks associated with sediment exposure. In Alternative 4, once the

sediments with PCB concentrations above 1 mg/kg are removed from these areas, the natural recovery process of Brier Creek Reservoir, Lake Crabtree, and beyond would speed up.

In addition to sediment removal from the streams, Alternative 5 would also remove sediments in Brier Creek Reservoir and Lake Crabtree. As a result, the time required to achieve acceptable fish tissue PCB concentrations after completion activities may be less than the timeframe required in Alternative 4. However, due to the complexity of Alternative 5, the total time required for planning, design and implementation of this alternative would be considerable greater than Alternative 4

In Alternative 5, if dredging is used, due to technology limitations, some dredging residuals levels will remain in the reservoir and lake, including low levels of PCB contamination in the biologically active sediment zone. PCBs in dredging residuals could impact fish concentrations in the reservoir and lake for many years after completion of the dredging operations.

In addition, the large-scale excavation/dredging operations in Brier Creek Reservoir and Lake Crabtree in Alternative 5 will disturb or destroy benthic and other aquatic biota and habitats in the reservoir and the lake. The dredging/excavation activities of Alternative 5 could adversely impact threatened bald eagles within the reservoir and lake areas for foraging and breeding. Over the long term, re-establishments of these habitats may be difficult.

Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment evaluates an alternative's use of treatment to

reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.

EPA will use treatment to address site contaminants wherever practicable; however, because of the relatively low levels of PCBs in the sediments, treatment is not proposed for any of the alternatives. Therefore the statutory preference for treatment is not met.

Short-term Effectiveness considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.

Alternatives 1, 2, and 3 do not involve any active remedial action; therefore, they would not pose any additional risks to the community or workers during implementation, nor would they result in any adverse environmental impacts.

In Alternative 3, under current conditions (assuming that the Removal Action at the Ward Transformer facility and Reach A is completed before commencement of OU1 activities), modeling indicates that PCB concentrations in sediments at Brier Creek Reservoir and Lake Crabtree may take more than 30 years to decline to levels that correspond to acceptable PCB levels in fish.

In Alternatives 4 and 5, the potential for additional risks to the community may exist due to dust and excessive noise from the construction of access roads, construction equipment, and vehicular traffic to the off-site disposal facility. Risks to the community will be minimized by establishing buffer zones around the work areas, limiting work hours, and using dust-suppressing techniques. Risks

to the environment may include clearing of vegetation and trees for access roads and excavation/dredging equipment. Measures will be taken to minimize the impact on the environment by avoiding the wetlands and floodplain areas to the extent possible. There will be adverse impacts to the stream and lake habitats due to the sediment removal activities, especially for benthic and other aquatic organisms. Many of these organisms may be disturbed or destroyed during the excavation/dredging activities. The presence or absence of threatened or endangered mussel species needs to be established prior to commencing intrusive activities. If threatened or endangered mussel species are identified, additional safeguards will need to be put into place to protect these species. In addition, the potential for adverse impacts to threatened bald eagles utilizing areas within OU1 as foraging and breeding habitat exists and precautions would be required to minimize these potential impacts. Due to the larger extent and complexity of excavation/dredging activities associated with Alternative 5, all the above-mentioned impacts will be much greater for Alternative 5 than Alternative 4.

In Alternative 4, the estimated time required to complete the remediation work is 3 to 5 months. The estimated time required to attain acceptable PCB concentrations in fish tissue at the Brier Creek Reservoir is approximately 14 years. The time required to attain acceptable PCB concentrations in fish tissue at Lake Crabtree is approximately 9 years.

Due to the complexity of Alternative 5, it is estimated that planning, design and implementation of this alternative would require a considerable greater amount of time than Alternative 4. In addition, it is estimated that any dredging activities associated with Alternative 5 would take at least 3 years to

complete after all design and planning documents are completed.

In Alternative 5, the estimated time required to attain acceptable PCB concentrations in fish tissue at the Brier Creek Reservoir is approximately 12 years after the completion of excavation/dredging. The time required to attain acceptable PCB concentrations in fish tissue at Lake Crabtree is expected to be 8 years.

Therefore, between Alternatives 4 and 5, removing a larger amount of sediments in Alternative 5 does not necessarily correspond to a shorter amount of time to achieve clean up goals than in Alternative 4.

Implementability considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.

Alternatives 1, 2, and 3 can be easily implemented because there is no construction, involved. Alternatives 1 and 2 can be easily implemented because there are no monitoring activities.

In Alternatives 2, 3, 4 and 5, the North Carolina fish consumption advisories and signs are already in place. In Alternatives 3, 4 and 5 reduction in PCB concentrations in sediment and fish will be determined through the periodic monitoring program, which can be easily implemented.

Alternative 4 is technically feasible to implement. Contractors are readily available for construction of access roads, excavation, and off-site disposal. Coordination with other agencies and obtaining approvals and permit equivalencies for excavation, transport of excavated materials, etc. will be required.

The implementation of Alternative 5 is much more complex and difficult than Alternative 4, and it will require much more time. In addition to all the components that are included in Alternative 4, excavation/dredging of sediments at Brier Creek Reservoir and Lake Crabtree is included in Alternative 5. Dredging is a specialized technology, which requires advanced planning, selection of the proper dredging method, and detailed remedial design. Dewatering and treatment of water are also significant design and cost components of the dredging alternative.

During the implementation of Alternatives 4 and 5 a pre-remediation mussel study will be conducted to determine if the endangered/threatened species exists in the streams to be excavated. Consultation with the respective federal and state agencies will be required prior to the commencement of the excavation activities.

Some portions of OUI consist of wetlands and floodplains. Coordination with federal agencies will be required to ensure that the impact on these areas will be minimal. Threatened bald eagles nest at the Lake Crabtree and forage at Lake Crabtree and Brier Creek Reservoir. State endangered/threatened mussel species have been reported in the nearby Umstead State Park, which is part of the Crabtree Creek watershed.

The Crabtree Creek Recreational Demonstration Area (Umstead State Park) is a historical site listed in the National Register of Historic Places. Precautionary measures will be taken to minimize harm to historic property to the extent practicable during remedial actions conducted in this area and in the vicinity. Consultation with federal and state historic and archeological agencies will be

necessary before initiating any activities in the vicinity of this area.

Costs include estimated capital and annual operations and maintenance (O&M) costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value.

There are no capital costs associated with Alternative 1. However, 5-year reviews will be conducted, as required by CERCLA. For costing purposes, it is assumed that 5-year reviews would be conducted for 30 years.

For Alternative 2, in addition to the 5-year review, yearly operation and maintenance costs for community outreach and educational programs are included for 30 years. For Alternative 3, all the costs in Alternative 2 plus yearly MNR monitoring costs are included for 30 years.

Alternative 4 includes the same costs associated with Alternative 3 plus the capital costs associated with excavation and off-site disposal of sediment from Reaches B, C, D, and lower Brier Creek (because remedial actions would last for less than 6 months, there are no recurring costs associated with this alternative). Capital costs of remediation include pre-remediation sampling, mobilization/demobilization, construction of access roads, temporary staging areas, excavation, off-site transport and disposal, and site restoration.

For Alternative 5, in addition to the costs associated with Alternative 4, dredging and off-site disposal of sediments in Brier Creek Reservoir and Lake Crabtree are included. There are additional components related to dredging operations, for example, dewatering and effluent treatment.

For Alternatives 4 and 5, the MNR monitoring costs were included for only 15 years, because it is expected that the clean up levels would be met in less than 15 years.

The present-worth costs for the remedial alternatives are summarized below:

Alternative 1:	\$ 332,000
Alternative 2:	\$ 476,000
Alternative 3:	\$ 2,247,000
Alternative 4:	\$ 4,989,000
Alternative 5:	\$ 540,982,000

Alternative 5 would be extremely expensive, considering the large volume of sediments to be removed. According to modeling results, the time difference in achieving the clean up levels associated with fish consumption in Alternative 4 and 5 is only a few years. But due to the complexity of Alternative 5, it is estimated that planning, design and implementation of this alternative would require a considerably greater amount of time than Alternative 4. Therefore, removing a larger amount of sediments does not necessarily correspond to a shorter amount of time to achieve clean up goals. Based on the foregoing, it would be far more cost-effective to consider Alternative 4 over Alternative 5.

State/Support Agency Acceptance considers whether the State agrees with the EPA's analyses and recommendations, as described in the RI/FS and Proposed Plan.

The Waste Management Division and the NCDENR (North Carolina Department of Environment and Natural Resources) agree with the preferred alternative.

Community Acceptance Community acceptance of the preferred alternative will be evaluated after the public comment period and will be described in the Record of Decision (ROD) for the Site.

SUMMARY OF THE PREFERRED ALTERNATIVE

The preferred alternative is Alternative 4: Excavation and Off-Site Disposal of Sediments in Reaches B, C, and D, and Lower Brier Creek; Monitored Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; and Institutional Controls. The preferred alternative includes:

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- Conduct pre-excavation sampling and endangered mussel study.
- Excavate sediments in Reaches B, C, and D and lower Brier Creek, and transport sediments off-site for appropriate disposal.
- Site and stream restoration.
- MNR - Periodic monitoring of sediments and aquatic biota in the Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek.
- Conduct Five-year review.

Based on the information available at this time, EPA and the NC DENR believe the preferred alternative provides the best balance of tradeoffs of all the alternatives with respect to the balancing and modifying criteria. EPA expects the preferred alternative to satisfy the statutory requirements of CERCLA §121(b), which include that the alternative would be protective of human health and the environment, would comply with ARARs, would be cost-effective, and would utilize permanent solutions. The preferred alternative can change in response to public comment or new information.

EPA provides information regarding the cleanup of the Ward Transformer Site to the public through Emails, Fact Sheets, public meetings, and the Administrative Record file for the Site. EPA and the State encourage the public to gain a more comprehensive understanding of the Site and the Superfund activities that have been conducted at the Site.

Information regarding the public comment period, public meeting and the locations of the Administrative Record files, are provided on the front page of this Proposed Plan. For further information on the Ward Transformer Site, please contact:

Luis E. Flores, Remedial Project Manager
(404) 562-8807 or E-mail: flores.luis@epa.gov

Or

Angela Miller, Community Involvement Coordinator
(404) 562-8561 or E-mail: miller.angela@epa.gov

US EPA
61 Forsyth Street, SW
Atlanta, GA 30303-8960

USE THIS SPACE TO WRITE YOUR COMMENTS

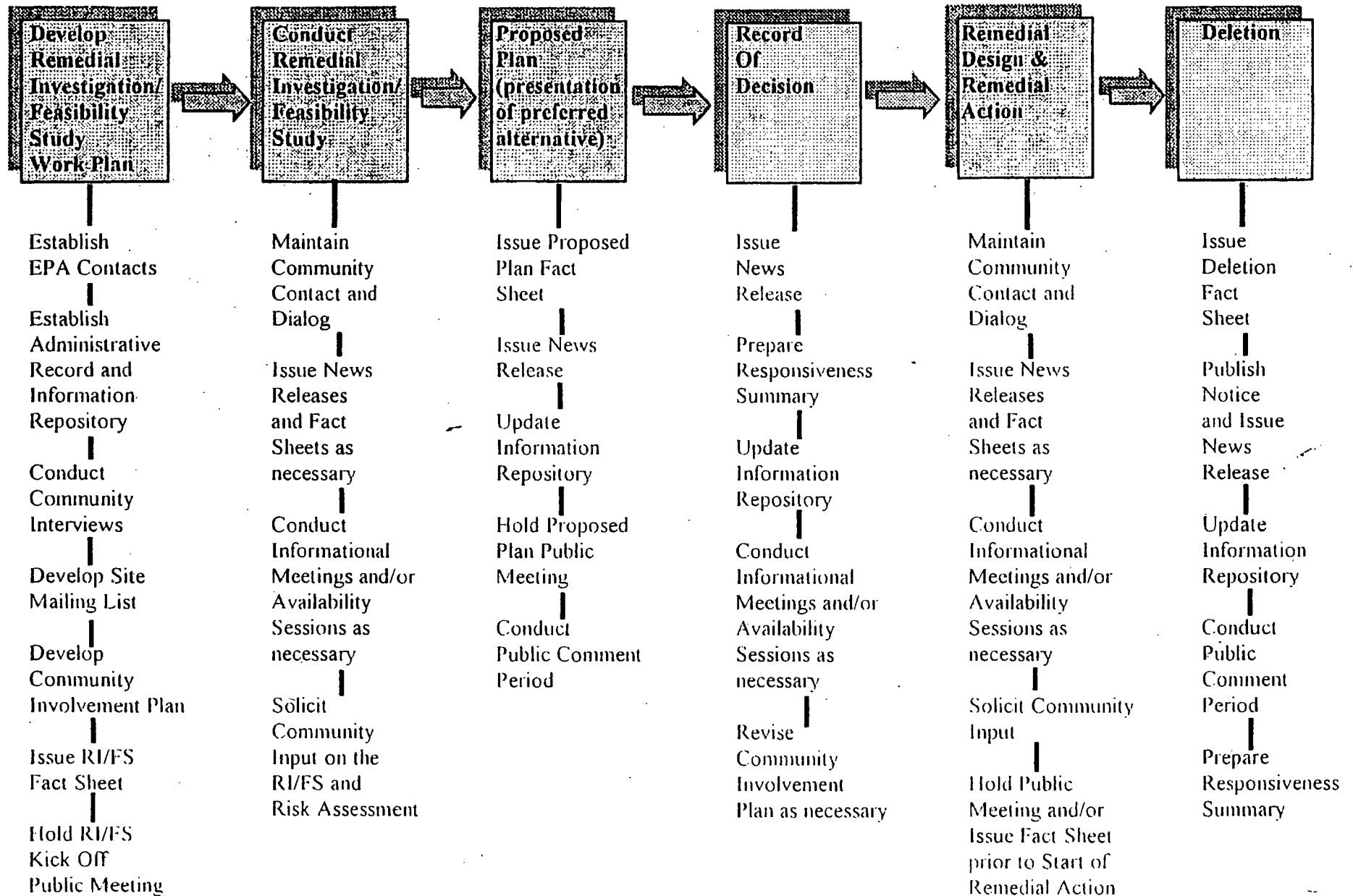
Your input on this Proposed Plan for the Ward Transformer Site OU1 is important to EPA. Comments provided by the public are valuable in helping EPA select a final cleanup remedy for the Site. You may use the space below to write your comments. Comments must be postmarked by September 4, 2007. If you have any questions about the comment period, please contact Luis E. Flores at (404) 562-8807. Those with electronic communication capabilities may submit their comments to EPA via the internet to *flores.luis@epa.gov*.

Comments may also be mailed to:

Luis E. Flores
Superfund Division-SRSEB
US Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, GA 30303

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

Community Involvement Activities and Opportunities During the Superfund Process



What is a Remedial Investigation?

A Remedial Investigation (RI) is an intensive study of a Superfund site. It is carried out by an EPA team of health and environmental specialists such as hydrogeologists, engineers, and biologists to determine the exact nature of the hazardous wastes, the nature of threat, if any, that may be posed to human health or the environment, and the extent of any contamination present at a site.

Typically, the RI report will describe the type and extent of on-site and off-site contamination, effects of contamination on surface water and groundwater, and the degree of contamination in the soil. To achieve these findings, EPA personnel or the Potentially Responsible Party (PRP) contractor, supervised by EPA, will take numerous samples of the soil, stream sediment, and surface water at various locations at the site. In addition, monitoring wells will be installed to sample groundwater, and where necessary an ecological study will be conducted.

These samples are sent to laboratories to be analyzed for various contaminants, i.e., metals, minerals, organics, inorganics, etc.. Sampling data also will be used to determine whether or not the contaminants are moving from the site, where they might go, and what sensitive areas may be affected. Based on this information, a Risk Assessment is conducted to estimate the potential impact of the contaminants on human health and the environment. All of the data gathered through this investigation is compiled into an RI report. EPA determines from this report what the contaminants of concern at a site are and how they will be addressed.

What is a Feasibility Study?

The Feasibility Study (FS) is the portion of the process where EPA environmental engineers and other technical staff consider, describe, and evaluate options for cleaning up the site based on the RI information.

As required by the Superfund program, the possible treatment options under consideration need to meet nine specific criteria in order to be acceptable. These criteria are:

- Overall protection of human health and the environment; adequate elimination, reduction or control of all current and likely potential risks posed by the site.
- Compliance with applicable and/or relevant Federal or State public health or environmental standards, unless a waiver is warranted where protection is ensured.
- Long-term effectiveness and permanence of the remedy.
- Reduction of the toxicity (harmfulness), mobility (potential to move), or volume of hazardous substances or contaminants.
- Short-term effectiveness, or the impacts a remedy might have on the community, workers, or the environment during the course of implementing it.
- Implementability, the capability to carry out the remedy selected.
- Cost-effectiveness, considering the cost of construction, operation, and maintenance of it over the life of the project, including remedial costs should the remedy fail.
- Acceptance by the State.
- Acceptance by the community.

The nine criteria for selecting an alternative will vary in importance depending upon site-specific conditions.

Appendix G

Statement of Work

**STATEMENT OF WORK FOR THE
REMEDIAL DESIGN AND REMEDIAL ACTION
FOR OPERABLE UNIT 1
AT THE WARD TRANSFORMER SUPERFUND SITE**

I. INTRODUCTION

This Statement of Work (SOW) outlines the remaining work to be performed for Operable Unit 1 (OU-1) of the remedy at the Ward Transformer Superfund Site in Raleigh, Wake County, North Carolina (Site). The work outlined is intended to complete the full implementation of the remedy as described in the Record of Decision (ROD) for the Site, dated September 29, 2008, and to achieve the Performance Standards set forth in the ROD and this SOW. The requirements of this SOW will be further detailed in work plans and other documents to be submitted for approval as set forth in this SOW. It is not the intent of this document to provide task specific engineering or geological guidance. The definitions set forth in Section IV of the Consent Decree (CD) shall also apply to this SOW unless expressly provided otherwise herein.

The OU-1 work completed to date was performed from 2011-2016 by a group of parties that are Settling Defendants under the CD. This work included completion of the Remedial Design Work Plan, Phase I Pre-Design Investigation Work Plan; Phase II Pre-Design Investigation Work Plan, Phase II Pre-Design Investigation Initial Sampling Report, and Delineation Refinement Sampling Plan. The sampling results from these activities will provide the basis of the Remedial Design to be completed under this SOW.

Pursuant to the CD, the Performing Settling Defendants (PSDs) are responsible for performing the remaining work to implement the selected remedy. EPA shall conduct oversight of PSDs' activities throughout the performance of the Work. PSDs shall assist EPA in conducting oversight activities.

EPA review or approval of a task or deliverable shall not be construed as a guarantee as to the adequacy of such task or deliverable. If EPA modifies a deliverable pursuant to Paragraph 13 of the CD, such deliverable as modified shall be deemed approved by EPA for purposes of this SOW. A summary of the major deliverables to be submitted for the Work is attached.

II. OVERVIEW OF THE REMEDY

The Remedial Action Objectives (RAO) are to:

- Minimize potential downstream migration of PCB-contaminated soil and sediment.
- Reduce PCB levels in fish tissue to levels that allow for unlimited consumption.

III. SELECTED REMEDY

The remedy includes:

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.
- Restore site and stream to pre-remediation conditions.
- Implement Monitored Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.
- Conduct periodic monitoring of sediment and aquatic biota.
- Implement Institutional Controls.
- Conduct Five-year reviews.

A. Components

A description of each component is provided below:

- *Continue or enhance existing fish consumption advisories and signs.*

Fish consumption advisories and signs would continue to be in place until PCB concentrations in fish are below the remediation goal (0.05 mg/kg). This component of the remedy would also include the implementation and posting of additional fish consumption advisories and signs, or any modifications to the existing ones, as needed. The continuance or enhancement of fish advisories and signs would help reduce the potential risks to humans through fish consumption.

- *Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.*

Based on the results of the pre-excavation sampling program, sediments and flood plain soil from Reaches B, C, D, and lower Brier Creek will be excavated to PCB levels below 1 mg/kg. Excavated sediments/soil will be transported and properly disposed of off-site. An excavation verification plan will be developed as part of the Remedial Design. Verification samples will be collected to ensure the 1 mg/kg remediation goal is achieved.

Prior to the excavation of stream sediments, sections of the stream flow could be blocked off and water could be bypassed through pipes running parallel to the blocked stream section. Major activities associated with this alternative would include stream diversion, construction of access roads to transport equipment and haul excavated material, excavation of sediments/soil,

construction of temporary staging areas, transport excavated sediment/soil off-site to be disposed properly, and conduct verification sampling.

Precautions would be taken to minimize any impact on identified local endangered and threatened species. Also, activities would be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks, construction, and erosion and sediment control.

- ***Restore site and stream to pre-remediation conditions.***

To the extent feasible, all disturbed areas would be restored to pre-remediation conditions. This includes replenishment and revegetation of areas where sediment and soil was removed, and restoration of areas that were disturbed during remediation activities, including temporary staging areas, and areas cleared for access roads.

- ***Implement Monitored Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.***

Monitored Natural Recovery, which allows natural processes to achieve remediation goals would be implemented in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek. MNR is a sediment remedy that uses ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment, thereby reducing potential risks to human and/or ecological receptors.

Periodic monitoring of sediment would be conducted to assess PCB concentrations in sediment over time. In addition, monitoring of aquatic biota (fish sampling) would be conducted to support future decisions regarding fish consumption advisories. An MNR sampling program would be developed and implemented, in accordance with EPA sediment guidance for evaluating Natural Recovery remedies, to document lines of evidence of natural recovery in sediment. MNR would be conducted until remediation goals are achieved.

- ***Conduct periodic monitoring of sediment and aquatic biota.***

Periodic monitoring of sediment and aquatic biota (fish sampling) would be conducted. A monitoring program would be developed to assess the remedy and support future decisions regarding fish consumption advisories and protection of ecological receptors. Periodic monitoring would be conducted until remediation goals are achieved.

- ***Implement Institutional Controls.***

As appropriate and necessary, Institutional Controls would be implemented to ensure short and long term protection of human health and the environment. Continue or enhance existing fish consumption advisories and signs was identified as an Institutional Control measure appropriate for the Site. Other Institutional Control measures might be identified and implemented.

- *Conduct five-year reviews.*

Five-year reviews would be conducted to evaluate the implementation and performance of the selected remedy, and in order to determine if the remedy continues to be protective of human health and the environment. Five-year reviews would be conducted as required under CERCLA.

B. Performance Standards

PSDs shall meet all Performance Standards, as defined in the attached Record of Decision.

PSDs shall implement the remedy and all its components until they have demonstrated compliance with the respective Performance Standards, in accordance with the Performance Standards Verification Plan.

C. Compliance Testing

PSDs shall perform compliance testing to ensure that all Performance Standards are met. The excavations and disposal material shall be tested in accordance with the Performance Standard Verification Plan developed pursuant to Task III of this SOW.

IV. COMMUNITY INVOLVEMENT

A. Community Involvement Responsibilities

1. EPA has the lead responsibility for developing and implementing community involvement activities at the Site. Previously [during the RI/FS phase], EPA developed a Community Involvement Plan (CIP) for the Site. Pursuant to 40 C.F.R. § 300.435(c), EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities during the Work that are not already addressed or provided for in the existing CIP, including, if applicable, any Technical Assistance Grant (TAG), any use of the Technical Assistance Services for Communities (TASC) contract, and/or any Technical Assistance Plan (TAP).

2. If requested by EPA, PSDs shall participate in community involvement activities, including participation in (1) the preparation of information regarding the Work for dissemination to the public, with consideration given to including mass media and/or Internet notification, and (2) public meetings that may be held or sponsored by EPA to explain activities at or relating to the Site. PSDs' support of EPA's community involvement activities may include providing online access to initial submissions and updates of deliverables to (1) any Community Advisory Groups, (2) any Technical Assistance Grant recipients and their advisors, and (3) other entities to provide them with a reasonable opportunity for review and comment. EPA may describe in its CIP PSDs' responsibilities for community involvement activities. All community involvement activities conducted by PSDs at EPA's request are subject to EPA's oversight.

Upon EPA's request, PSDs shall establish a community information repository at or near the Site to house one copy of the administrative record.

3. PSDs' CI Coordinator. If requested by EPA, PSDs shall, within 15 days, designate and notify EPA of PSDs' Community Involvement Coordinator (PSDs' CI Coordinator). PSDs may hire a contractor for this purpose. PSDs' notice must include the name, title, and qualifications of the PSDs' CI Coordinator. PSDs' CI Coordinator is responsible for providing support regarding EPA's community involvement activities, including coordinating with EPA's CI Coordinator regarding responses to the public's inquiries about the Site.

V. PLANNING AND DELIVERABLES

The specific scope of this work shall be documented by PSDs in a Remedial Design (RD) Work Plan and a Remedial Action (RA) Work Plan. Plans, specifications, submittals, and other deliverables shall be subject to EPA review and approval in accordance with Section VI of the CD.

PSDs shall submit a technical memorandum documenting any need for additional data along with the proposed Data Quality Objectives (DQOs) whenever such requirements are identified. PSDs are responsible for fulfilling additional data and analysis needs identified by EPA during the RD/RA process consistent with the general scope and objectives of this SOW.

PSDs shall perform the following tasks:

TASK I - REMEDIAL DESIGN

The Remedial Design shall provide the technical details for implementation of the Remedial Action in accordance with currently accepted environmental protection technologies and standard professional engineering and construction practices. The design shall include clear and comprehensive design plans and specifications.

A. Remedial Design Planning

PSDs shall implement the RD Work Plan approved by EPA in June 2012 in accordance with the design management schedule contained therein. Plans, specifications, submittals, and other deliverables shall be subject to EPA review and approval in accordance with Section VI of the CD. Review and/or approval of design submittals only allow PSDs to proceed to the next step of the design process. It does not imply acceptance of later design submittals that have not been reviewed, nor that the remedy, when constructed, will meet Performance Standards.

B. Preliminary Design

Preliminary Design shall begin with initial design and shall end with the completion of approximately 30 percent of the design effort. At this stage, PSDs shall field verify, as necessary, the existing conditions of the Site. The technical requirements of the Remedial Action shall be addressed and outlined so that they may be reviewed to determine if the final design will provide

an effective remedy. Supporting data and documentation shall be provided with the design documents defining the functional aspects of the project. EPA approval of the Preliminary Design is required before proceeding with further design work, unless specifically authorized by EPA. In accordance with the design management schedule established in the approved Remedial Design Work Plan, PSDs shall submit to EPA the Preliminary Design submittal which shall consist of the following:

1. Results of Data Acquisition Activities

Data gathered during the project planning phase shall be compiled, summarized, and submitted along with an analysis of the impact of the results on design activities. In addition, surveys conducted to establish topography, rights-of-way, easements, and utility lines shall be documented. Utility requirements and acquisition of access, through purchases or easements that are necessary to implement the RA shall also be discussed.

2. Design Criteria Report

The concepts supporting the technical aspects of the design shall be defined in detail and presented in this report. Specifically, the Design Criteria Report shall include the preliminary design assumptions and parameters, including:

- Waste characterization
- Pretreatment requirements
- Volume of each media requiring treatment
- Treatment schemes (including all media and by-products)
- Input/output rates
- Influent and effluent qualities
- Materials and equipment
- Performance Standards
- Long-term monitoring requirements

3. Preliminary Plans and Specifications

PSDs shall submit an outline of the required drawings, including preliminary sketches and layouts, describing conceptual aspects of the design, unit processes, etc. In addition, an outline of the required specifications, including Performance Standards, shall be submitted. Construction drawings shall reflect organization and clarity, and the scope of the technical specifications shall be outlined in a manner reflecting the final specifications.

4. Plan for Satisfying Permitting Requirements

All activities must be performed in accordance with the requirements of all applicable federal and state laws and regulations. Any off-site disposal shall be in compliance with Section 121(d)(3) of CERCLA, 42 U.S.C. 9621(d)(3), with the U.S. EPA "Off-Site Policy," 40 CFR § 300.440 (50 Fed. Reg. 49200, September 22, 1993), and with all other applicable Federal, State and local requirements. The plan shall identify the off-site disposal/discharge permits that are

required, the time required to process the permit applications, and a schedule for submittal of the permit applications.

C. Prefinal/Final Design

PSDs shall submit the Prefinal Design when the design work is approximately 90 percent complete in accordance with the approved design management schedule. PSDs shall address comments generated from the Intermediate Design Review and clearly show any modification of the design as a result of incorporation of the comments. Essentially, the Prefinal Design shall function as the draft version of the Final Design. After EPA review and comment on the Prefinal Design, the Final Design shall be submitted along with a memorandum indicating how the Prefinal Design comments were incorporated into the Final Design. All Final Design documents shall be certified by a Professional Engineer registered in the State of North Carolina. EPA written approval of the Final Design is required before initiating the RA, unless specifically authorized by EPA.

The following items shall be submitted with or as part of the Prefinal/Final Design:

1. Complete Design Analyses - The selected design shall be presented along with an analysis supporting the design approach. Design calculations shall be included.
2. Final Plans and Specifications - A complete set of construction drawings and specifications shall be submitted which describe the selected design.
3. Final Construction Schedule - PSDs shall submit a final construction schedule to EPA for approval.
4. Construction Cost Estimate - An estimate within +15 percent to -10 percent of actual construction costs shall be submitted.

D. Institutional Controls Implementation and Assurance Plan

Concurrent with the Pre-Final Design, PSDs shall submit the Institutional Controls Implementation and Assurance Plan (ICIAP). The ICIAP will be a plan to implement the Institutional Controls set forth in the ROD. The ICIAP shall include, but not be limited to:

- a description of the areas where human activities should be restricted, including legal descriptions for such areas, sample maps, and a plan for preparing final survey maps;
- a description of the pathways for potential human exposure to Waste Materials that may remain during and/or after completion of construction of the RA;
- a list of properties where Proprietary Controls are needed;
- a description of the proposed Institutional Controls and their purpose;
- a description of the proposed duration of each Institutional Control and an explanation for such duration;
- a schedule for implementing each Institutional Control;
- a schedule for completing title work;

- draft Proprietary Controls enforceable under state law to implement the proposed land/water use restrictions;
- a description of the authority of each affected property owner to implement each Proprietary Control, including title insurance commitments or other title evidence acceptable to EPA for proposed Proprietary Controls;
- a description of all prior liens and encumbrances existing on any real property that may affect the Proprietary Controls or the protectiveness of the remedy, and a plan for the release or subordination of any such liens and encumbrances (unless EPA waives the release or subordination of such liens or encumbrances);
- a plan for monitoring, maintaining, reporting on, and insuring the continued efficacy of the Institutional Controls and a contingency plan in the event ICs are ineffective; and
- a schedule for annual certifications regarding whether the Institutional Controls remain in place, regarding whether the Institutional Controls have been complied with, and regarding enforcement of the Institutional Controls.

The ICIAP will be effective upon EPA's approval.

TASK II - REMEDIAL ACTION

Remedial Action shall be performed by PSDs to implement the response actions selected in the ROD.

A. Remedial Action Planning

Concurrent with the submittal of the Prefinal/Final Design, PSDs shall submit a draft Remedial Action (RA) Work Plan, Project Delivery Strategy, a Construction Management Plan, a Construction Quality Assurance Plan, and a Construction Health and Safety Plan/Contingency Plan. The RA Work Plan, Project Delivery Strategy, Construction Management Plan, and Construction Quality Assurance Plan must be reviewed and approved by EPA and the Construction Health and Safety Plan/Contingency Plan reviewed by EPA prior to the initiation of the Remedial Action.

Upon approval of the Final Design and the RA Work Plan, PSDs shall implement the RA Work Plan in accordance with the construction management schedule. Significant field changes to the RA as set forth in the RA Work Plan and Final Design shall not be undertaken without the approval of EPA. The RA shall be documented in enough detail to produce as-built construction drawings after the RA is complete. Deliverables shall be submitted to EPA for review and approval. Review and/or approval of submittals does not imply acceptance of later submittals that have not been reviewed, nor that the remedy, when constructed, will meet Performance Standards.

1. RA Work Plan

A Work Plan which provides a detailed plan of action for completing the RA activities shall be submitted to EPA for review and approval. The objective of this work plan is to provide for the safe and efficient completion of the RA. The Work Plan shall be developed in

conjunction with the Project Delivery Strategy, Construction Management Plan, the Construction Quality Assurance Plan, and the Construction Health and Safety Plan/Contingency Plan, although each plan may be delivered under separate cover. The Work Plan shall include a comprehensive description of the work to be performed and the Final Construction schedule for completion of each major activity and submission of each deliverable.

Specifically, the RA Work Plan shall present the following:

- A detailed description of the tasks to be performed and a description of the work products to be submitted to EPA. This includes the deliverables set forth in the remainder of Task III.
- A schedule for completion of each required activity and submission of each deliverable required by this SOW.
- A project management plan, including provision for monthly reports to EPA and meetings and presentations to EPA at the conclusion of each major phase of the RA. EPA's Project Coordinator and the PSDs' Project Coordinator will meet, at a minimum, on a quarterly basis, unless EPA determines that such meeting is unnecessary.
- At EPA's request, PSDs shall assist EPA in preparing and disseminating information to the public regarding the RA work to be performed.

2. Project Delivery Strategy

PSDs shall submit a document to EPA for review and approval describing the strategy for delivering the project. This document shall address the management approach for implementing the Remedial Action, including procurement methods and contracting strategy, phasing alternatives, and contractor and equipment availability concerns. If the construction of the remedy is to be accomplished by PSDs' "in-house" resources, the document shall identify those resources.

3. Construction Management Plan

A Construction Management Plan shall be developed to indicate how the construction activities are to be implemented and coordinated with EPA during the RA. PSDs shall designate a person to be a Remedial Action Coordinator and its representative on-site during the Remedial Action, and identify this person in the Plan. This Plan shall also identify other key project management personnel and lines of authority, and provide descriptions of the duties of the key personnel along with an organizational chart. In addition, a plan for the administration of construction changes and EPA review and approval of those changes shall be included.

4. Construction Quality Assurance Plan

PSDs shall develop and implement a Construction Quality Assurance Program to ensure, with a reasonable degree of certainty, that the completed Remedial Action meets or exceeds all design criteria, plans and specifications, and Performance Standards. The Construction Quality Assurance Plan shall incorporate relevant provisions of the Performance Standards Verification

Plan (see Task III). At a minimum, the Construction Quality Assurance Plan shall include the following elements:

- A description of the quality control organization, including a chart showing lines of authority, identification of the members of the Independent Quality Assurance Team (IQAT), and acknowledgment that the IQAT will implement the control system for all aspects of the work specified and shall report to the project coordinator and EPA. The IQAT members shall be representatives from testing and inspection organizations and/or the Supervising Contractor and shall be responsible for the QA/QC of the Remedial Action. The members of the IQAT shall have a good professional and ethical reputation, previous experience in the type of QA/QC activities to be implemented and demonstrated capability to perform the required activities. They shall also be independent of the construction contractor.
- The name, qualifications, duties, authorities, and responsibilities of each person assigned a QC function.
- Description of the observations and control testing that will be used to monitor the construction and/or installation of the components of the Remedial Action. This includes information which certifies that personnel and laboratories performing the tests are qualified and the equipment and procedures to be used comply with applicable standards. Any laboratories to be used shall be specified. Acceptance/Rejection criteria and plans for implementing corrective measures shall be addressed. A schedule for managing submittals, testing, inspections, and any other QA function (including those of contractors, subcontractors, fabricators, suppliers, purchasing agents, etc.) that involve assuring quality workmanship, verifying compliance with the plans and specifications, or any other QC objectives. Inspections shall verify compliance with all environmental requirements and include, but not be limited to, air quality and emissions monitoring records and waste disposal records, etc.
- Reporting procedures and reporting format for QA/QC activities including such items as daily summary reports, schedule of data submissions, inspection data sheets, problem identification and corrective measures reports, evaluation reports, acceptance reports, and final documentation.
- A list of definable features of the work to be performed. A definable feature of work is a task which is separate and distinct from other tasks and has separate control requirements.

5. Construction Health and Safety Plan/Contingency Plan

PSDs shall prepare a Construction Health and Safety Plan/Contingency Plan in conformance with PSDs' health and safety program, and in compliance with OSHA regulations and protocols. The Construction Health and Safety Plan shall include a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. EPA will not approve PSDs' Construction Health and Safety Plan/Contingency Plan, but rather EPA will review it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment. This plan shall include a

Contingency Plan and incorporate Air Monitoring and Spill Control and Countermeasures Plans if determined by EPA to be applicable for the Site. The Contingency Plan is to be written for the onsite construction workers and the local affected population. It shall include the following items:

- Name of person who will be responsible in the event of an emergency incident.
- Plan for initial site safety indoctrination and training for all employees, name of the person who will give the training and the topics to be covered.
- Plan and date for meeting with the local community, including local, state and federal agencies involved in the cleanup, as well as the local emergency squads and the local hospitals.
- A list of the first aid and medical facilities including, location of first aid kits, names of personnel trained in first aid, a clearly marked map with the route to the nearest medical facility, all necessary emergency phone numbers conspicuously posted at the job site (i.e., fire, rescue, local hazardous material teams, National Emergency Response Team, etc.)
- Plans for protection of public and visitors to the job site.
- A Spill Control and Countermeasures Plan which shall include the following:
 - Contingency measures for potential spills and discharges from materials handling and/or transportation.
 - A description of the methods, means, and facilities required to prevent contamination of soil, water, atmosphere, and uncontaminated structures, equipment, or material by spills or discharges.
 - A description of the equipment and personnel necessary to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage. This collected spill material must be properly disposed of.
 - A description of the equipment and personnel to perform decontamination measures that may be required for previously uncontaminated structures, equipment, or material.

6. Emergency Response and Reporting

a. **Emergency Response and Reporting.** If any event occurs during performance of the Work that causes or threatens to cause a release of Waste Material on, at, or from the Site and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, PSDs shall: (1) immediately take all appropriate action to prevent, abate, or minimize such release or threat of release; (2) immediately notify the authorized EPA officer (as specified in ¶ 6.b) orally; and (3) take such actions in consultation with the authorized EPA officer and in accordance with all applicable provisions of the Health

and Safety Plan, the Emergency Response Plan, and any other deliverable approved by EPA under the SOW.

b. **Release Reporting.** Upon the occurrence of any event during performance of the Work that PSDs are required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, PSDs shall immediately notify the authorized EPA officer orally.

c. The “authorized EPA officer” for purposes of immediate oral notifications and consultations under ¶ 6.a and ¶ 6.b is the EPA Project Coordinator, the EPA Alternate Project Coordinator (if the EPA Project Coordinator is unavailable), or the Director of the Superfund Division, EPA Region 4 (if neither EPA Project Coordinator is available).

d. For any event covered by ¶ 6.a and ¶ 6.b, PSDs shall: (1) within 14 days after the onset of such event, submit a report to EPA describing the actions or events that occurred and the measures taken, and to be taken, in response thereto; and (2) within 30 days after the conclusion of such event, submit a report to EPA describing all actions taken in response to such event.

e. The reporting requirements under ¶ 6 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

B. Prefinal Construction Inspection

Upon preliminary project completion PSDs shall notify EPA for the purpose of conducting a Prefinal Construction Inspection. Participants should include the Project Coordinators, Supervising Contractor, and Construction Contractor. The Prefinal Inspection shall consist of a walk-through inspection of the entire project site. The objective of the inspection is to determine whether the construction is complete and consistent with the SOW. Any outstanding construction items discovered during the inspection shall be identified and noted on a punch list. A Prefinal Construction Inspection Report shall be submitted by PSDs which outlines any outstanding construction items, actions required to resolve the items, completion date for the items, and an anticipated date for the Final Inspection.

C. Final Construction Inspection

Upon completion of all outstanding construction items, PSDs shall notify EPA for the purpose of conducting a Final Construction Inspection. The Final Construction Inspection shall consist of a walk-through inspection of the entire project site. The Prefinal Construction Inspection Report shall be used as a check list with the Final Construction Inspection focusing on the outstanding construction items identified in the Prefinal Construction Inspection. Confirmation shall be made during the Final Construction Inspection that all outstanding items have been resolved. Any outstanding construction items discovered during the inspection still requiring correction shall be identified and noted on a punch list. If any items are still unresolved, the inspection shall be considered to be a Prefinal Construction Inspection requiring another Prefinal Construction Inspection Report and subsequent Final Construction Inspection.

D. Final Construction Report

Within thirty (30) days following the conclusion of the Final Construction Inspection, PSDs shall submit a Final Construction Report. EPA will review the draft report and will provide comments to PSDs. The Final Construction Report shall include the following:

- Brief description of how outstanding items noted in the Prefinal Inspection were resolved;
- Explanation of modifications made during the RA to the original RD and RA Work Plans and why these changes were made;
- Synopsis of the construction work defined in the SOW and certification that the construction work has been completed.

1. Remedial Action Report

Within 30 days after PSDs conclude that the Remedial Action has been fully performed and the Performance Standards have been attained, PSDs shall so certify to the United States and shall schedule and conduct a pre-certification inspection to be attended by EPA and PSDs. If after the pre-certification inspection PSDs still believe that the Remedial Action has been fully performed and the Performance Standards have been attained, PSDs shall submit a Remedial Action (RA) Report in accordance with EPA guidance “Closeout Procedures for NPL Sites” OERR 540-R-98-016. The RA Report shall include the following:

- A copy of the Final Construction Report;
- Synopsis of the work defined in this SOW and a demonstration in accordance with the Performance Standards Verification Plan that Performance Standards have been achieved;
- Certification that the Remedial Action has been completed in full satisfaction of the requirements of this SOW, and;
- A description of how PSDs will implement any remaining part of the EPA approved Operation and Maintenance Plan.

After EPA review, PSDs shall address any comments and submit a revised report, if needed. The Remedial Action shall not be considered complete until EPA approves the RA Report.

TASK III - PERFORMANCE MONITORING

Performance monitoring shall be conducted to ensure that all Performance Standards are met.

A. Performance Standards Verification Plan

The purpose of the Performance Standards Verification Plan is to provide a mechanism to ensure that both short-term and long-term Performance Standards for the Remedial Action are

met. Guidance documents used in developing the Sampling and Analysis Plan during the Remedial Design phase shall be used. PSDs shall submit a Performance Standards Verification Plan with the Preliminary Design. Once approved, PSDs shall implement the Performance Standards Verification Plan on the approved schedule. The Performance Standards Verification Plan shall include:

- The Performance Standards Verification Field Sampling and Analysis Plan that provides guidance for all fieldwork by defining in detail the sampling and data gathering methods to be used. The Performance Standards Verification Field Sampling and Analysis Plan shall be written so that a field sampling team unfamiliar with the Site would be able to gather the samples and field information required.
- The Performance Standards Verification Quality Assurance/Quality Control plan that describes the quality assurance and quality control protocols which will be followed in demonstrating compliance with Performance standards.

Specification of those tasks to be performed by PSDs to demonstrate compliance with the Performance Standards and a schedule for the performance of these tasks.

VI. SCHEDULES

Applicability and Revisions. All deliverables and tasks required under this SOW must be submitted or completed by the deadlines or within the time durations listed in the RD and RA Schedules set forth below. PSDs may submit proposed revised RD Schedules or RA Schedules for EPA approval. Upon EPA's approval, the revised RD and/or RA Schedules supersede the RD and RA Schedules set forth below, and any previously-approved RD and/or RA Schedules.

RD Schedule

	Description of Deliverable, Task	¶ Ref.	Deadline
1	Preliminary (30%) RD	Task I-B	90 days after EPA approval of Final Pre-Design Investigation Report (PDIR)
2	Intermediate (60%) RD		120 days after EPA approval of Preliminary (30%) RD
3	Pre-final (90%) RD	Task I-C	90 days after EPA comments on Intermediate RD
4	Final (100%) RD	Task I-C	60 days after EPA comments on Pre-final RD

RA Schedule

	Description of Deliverable / Task	¶ Ref.	Deadline
1	Award RA contract	Task II-A	60 days after EPA Notice of Authorization to Proceed with RA
2	Remedial Action Work Plan (RAWP)	Task II-A	120 days after Award of RA contract
3	Permitting	Task II-A	90 days after Approval of RAWP
4	Pre-Construction Conference	Task II-A	90 days after Approval of RAWP
5	Start of Construction	Task II-A	45 days after Pre-Construction Conference
6	Completion of Construction	Task II-A	
7	Prefinal Construction Inspection	Task II-B	30 days after completion of construction
8	Prefinal Construction Inspection Report	Task II-B	60 days after completion of Prefinal Inspection
9	Final Construction Inspection	Task II-C	30 days after Completion of Work identified in Prefinal Inspection Report
10	RA Final Inspection Report	Task II-D	30 days after Final Inspection
11	Work Completion Report	Task III	

At any time PSDs send a deliverable to EPA, they shall send a courtesy copy of such deliverable to the State:

Project Manager, Ward Transformer Site
NC Department of Environmental Quality
Division of Waste Management - Superfund Section
1646 Mail Service Center
Raleigh, NC 27699-1646

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RD/RA process. PSDs shall review these guidance documents and shall use the information provided therein in performing the RD/RA and preparing all deliverables under this SOW.

1. “National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule,” Federal Register 40 C.F.R. Part 300, March 8, 1990.
2. “Remedial Design and Remedial Action Guidance,” U.S. EPA, Office of Emergency and Remedial Response, June 1995, OSWER Directive No. 9355.0-04B, EPA 540/R-95/059.
3. “EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties — Interim Final” U.S. EPA, Office of Emergency and Remedial Response, April 1990, OSWER Directive No. 9355.5-01.
4. “Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final,” U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 355.3-01.
5. “A Compendium of Superfund Field Operations Methods,” Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
6. “EPA NEIC Policies and Procedures Manual,” EPA-330/9-78-001-R, May 1978, revised November 1984.
7. “Guidance for Quality Assurance Project Plans,” EPA/240/R-02/009, December 2002.
8. “EPA Requirements for Quality Assurance Project Plans,” EPA/240/B-01/003, March 2001.
9. “Guidance on Systematic Planning Using the Data Quality Objectives Process,” EPA/240/B-06/001, February 2006.
10. “Systematic Planning: A Case Study for Hazardous Waste Site Investigations,” EPA/240/B-06/004, February 2006.
11. “Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use,” OSWER No. 9200.1-85, EPA 540-R-08-005, January 13, 2009.
12. “Contract Laboratory Program Guidance for Field Samplers,” OSWER 9240.0-47, EPA 540-R-09-03, January 2011.

13. "USEPA Contract Laboratory Program Statement of Work for Organic Analysis," SOM01.2, May 2005.
14. "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods," ISM01.2, January 2010.
15. "Quality in the Constructed Project: A Guideline for Owners, Designers, and Constructors, Volume 1, Preliminary Edition for Trial Use and Comment," American Society of Civil Engineers, May 1988.
16. "ARARs Q's and A's: General Policy, RCRA, CWA, SDWA, Post-ROD Information and Contingent Waivers," OSWER 9234.2-01 FSA, June 1991.
17. "CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.
18. "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (Draft), OSWER Directive No. 9283.1-2.
19. "Guide for Conducting Treatability Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, Pre-publication Version.
20. "Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.
21. "Standard Operating Safety Guides," U.S. EPA, Office of Emergency and Remedial Response, November 1984.
22. "Standards for General Industry," 29 C.F.R. Part 1910, Occupational Health and Safety Administration.
23. "Standards for the Construction Industry," 29 C.F.R. 1926, Occupational Health and Safety Administration.
24. "NIOSH Manual of Analytical Methods," 2d edition. Volumes I - VII, or the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.
25. "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/ Environmental Protection Agency, October 1985.
26. "TLVs - Threshold Limit Values and Biological Exposure Indices for 1987 - 88," American Conference of Governmental Industrial Hygienists.

27. "American National Standards Practices for Respiratory Protection," American National Standards Institute Z88.2-1980, March 11, 1981.
28. "Quality in the Constructed Project - Volume 1," American Society of Civil Engineers, 1990.
29. "Closeout Procedures for National Priorities List Sites," OSWER Directive 9320.2-09A-P, EPA 540-R-98-016, January 2000.
30. "Memorandum, Region 4 Data Management and Electronic Data Deliverables," U.S. EPA, Region 4, Superfund Division, April 23, 2010.
31. Field Branches Quality System and Technical Procedures (<http://www.epa.gov/region4/sesd/fbotp/index.html>)
32. Other guidances referenced in the UAO that are not listed above (i.e., QA, Sample and Data Analysis, etc.).

SUMMARY OF THE MAJOR DELIVERABLES FOR THE
REMEDIAL DESIGN AND REMEDIAL ACTION AT
THE WARD TRANSFORMER SUPERFUND SITE
OPERABLE UNIT NUMBER 1

<u>DELIVERABLE</u>	<u>EPA RESPONSE</u>
<u>TASK I</u> <u>REMEDIAL DESIGN</u>	
Preliminary Design	
Results of Data Acquisition Activities (5)	Review and Approve
Design Criteria Report (5)	Review and Approve
Preliminary Plans and Specifications (5)	Review and Approve
Plan for Satisfying Permitting Requirements (5)	Review and Approve
Prefinal/Final Design	
Complete Design Analyses (5)	Review and Approve
Final Plans and Specifications (5)	Review and Approve
Final Construction Schedule (5)	Review and Approve
Construction Cost Estimate (5)	Review and Comment
Institutional Controls Implementation and Assurance Plan (ICIAP) (5)	Review and Approve
<u>TASK II</u> <u>REMEDIAL ACTION</u>	
RA Work Plan (5)	Review and Approve
Project Delivery Strategy (5)	Review and Approve

Construction Management Plan (5)	Review and Approve
Construction Quality Assurance Plan (5)	Review and Approve
Construction Health and Safety Plan/Contingency Plan (5)	Review and Comment
Prefinal Construction Inspection Report (5)	Review and Approve
Final Construction Report (5)	Review and Approve
Remedial Action Report (5)	Review and Approve

TASK III Monitoring

Performance Standards Verification Plan (5), **to be submitted within the Preliminary Design	Review and Approve
--	--------------------

*NOTE: The number in parenthesis indicates the number of copies to be submitted by the PSDs. One copy shall be unbound, the remainder shall be bound

**NORTH CAROLINA DEPARTMENT OF LABOR
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH**

OSH INSPECTION NO.
317837177

INFORMAL SETTLEMENT AGREEMENT

This Agreement is entered into by and between the Division of Occupational Safety and Health, North Carolina Department of Labor (hereinafter "OSH Division"), and the following employer:

N.C Department of Agriculture and Consumer Services dba N.C. Forest Service
(hereinafter "the Employer")

The OSH Division and the Employer specifically agree to the following items:

1. The Employer maintains a place of business at the following address:

3420 Playmore Beach Road
Lenoir, NC 28645

2. On August 13, 2014, an OSH Division compliance officer conducted an inspection at a worksite where one or more of the Employer's employees were performing work.

3. Based upon that inspection, the OSH Division issued a Citation and Notification of Penalty to the Employer (hereinafter referred to as a NCOSHA-2), on December 18, 2014 alleging a violation(s) of the Occupational Safety and Health Act of North Carolina and/or the standards and regulations promulgated thereunder.

4. This Agreement modifies the aforementioned NCOSHA-2 as follows:
 - a. Citation 01, 001 – reduce penalty from \$5,000.00 to \$2,500.00.
 - b. Citation items listed in the original NCOSHA-2 which are not hereby modified

RECEIVED
2-16-15

shall remain in effect.

5. In consideration of this Agreement, the Employer agrees to:

a. Develop, implement, maintain and periodically update an effective and comprehensive safety and health program. As part of the safety and health program, the employer will conduct job hazard analyses of all tasks that might expose workers to hazards, to include the use of material handling equipment such as farm tractors and attachments. Revise existing safety and health program to thoroughly address issues resulting from this inspection;

b. Ensure that safety and health rules are enforced (by the employer) through regular, scheduled and unscheduled, worksite inspections and established, documented disciplinary procedures;

c. Conduct safety training, as necessary, to ensure that all employees are adequately trained in the recognition and control or avoidance of hazards associated with their work environment. Provisions will be made for periodic retraining as needed;

d. Continue any present safety program, including conducting periodic safety meetings with employees at regular intervals. The employer will actively encourage all workers to participate in workplace safety activities. During such meetings, employees should be able to communicate safety suggestions or complaints to their supervisor;

e. Certify that it has abated the above-referenced Citation Item(s) or will abate the above-referenced Citation Item(s) by the abatement date contained in such Citation(s);

f. Waive its rights under the Occupational Safety and Health Act of North Carolina, N.C.G.S. '95-126 to 155, to contest any citation item(s), penalty(ies), or abatement date(s) listed on the NCOSHA-2 before the Safety and Health Review Commission of North Carolina and/or any other tribunal.

6. The parties agree that this Agreement is a full and final settlement of all the claims set

out in the underlying NCOSHA-2, and none of the foregoing agreements, statements or actions taken by the Employer shall be deemed an admission by the Employer of any of the allegations contained in the NCOSHA-2. The parties agree that in any subsequent proceeding brought by the North Carolina Department of Labor regarding matters covered by the Occupational Safety and Health Act of North Carolina or any matter involving the Retaliatory Employment Discrimination Act (Chapter 95, Article 21 of the North Carolina General Statutes), this Agreement shall have the full force and effect of a Final Order. The agreements, statements and actions taken herein are made solely for the purpose of settling this matter economically and amicably without litigation and shall not be used for any other purpose except for proceedings and matters arising under the Occupational Safety and Health Act of North Carolina or Article 21, Chapter 95 of the North Carolina General Statutes. This Agreement has been entered into prior to any notification by the Employer of the intent to contest a citation or the filing by the Employer of any notice relating to the time period established for abatement.

7. The parties agree to bear their own attorneys' fees, costs and other expenses incurred to date in this matter.

8. Pay the total penalty assessment of \$2,500.00 within 10 days of signing this agreement and return confirmation of abatements as necessary.

9. This Agreement shall be prominently posted at or near such place(s) any violation(s) referred to in the original citation occurred and in close proximity to that original citation.

WHEREFORE, the undersigned parties enter into and execute this Agreement.

This the 16 day of February, 2015.

For the OSH Division:
North Carolina Department of Labor

For the Employer:

Kristie Hall
Signature

N. David Smith
Signature

FOR
Jennie Cagle, NC OSH Compliance Supervisor
Printed Name/Title

N. David Smith, Chief Deputy Commissioner
Printed Name/Title



Steve Troxler
Commissioner

**North Carolina Department of Agriculture
and Consumer Services**
Food and Drug Protection Division

Audrey Pilkington
Director

June 23, 2015

Kelly Collier, Senior Director, Legal (Business)
Dollar General Corporation
100 Mission Ridge
Goodlettsville, TN 37072

Dear Ms. Collier:

Please find attached signed settlement agreement between the North Carolina Department of Agriculture and Consumer Services (NCDA&CS) and Dollar General.

Sincerely,

Audrey Pilkington
Director, Food & Drug Protection Division

cc: Joe Reardon
Tina Hlabse
Janine Owens
Anita MacMullan

STATE OF NORTH CAROLINA
COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, FOOD AND DRUG
PROTECTION DIVISION

IN THE MATTER OF:

DOLLAR GENERALSTORE #9525)	
DOLLAR GENERAL STORE #7286)	
DOLLAR GENERAL STORE #10444)	
DOLLAR GENERAL STORE #9440)	SETTLEMENT AGREEMENT
DOLLAR GENERAL STORE #4318)	
DOLLAR GENERAL STORE #1808)	
DOLLAR GENERAL STORE #7482)	
DOLLAR GENERAL STORE #4945)	
DOLLAR GENERAL STORE #11355)	
DOLLAR GENERAL STORE #4943)	

RECITALS

The North Carolina Department of Agriculture and Consumer Services (hereinafter "NCDA&CS") and Dollar General Corporation (hereinafter "Dollar General") desire to fully and finally settle this and all other disputes and controversies surrounding NCDA&CS's assessment of civil penalties against Dollar General for its violations of the North Carolina Food, Drug and Cosmetic Act, N.C. General Statute §106-129(1) (c) and (d) in the above referenced stores from September 2014 through December 2014.

WHEREAS, Dollar General was assessed civil penalties in the sum of Three Hundred Twenty-Six Thousand Dollars (\$326,000.00).

WHEREAS, Dollar General has expended a large amount of work, money and investment to develop and execute its remediation plan and bring all of its stores located in North Carolina into compliance with the North Carolina Food, Drug and Cosmetic Act.

WHEREAS the parties desire to resolve these matters without litigation.

NOW THEREFORE, the parties agree as follows:

1) Dollar General hereby agrees to pay the sum of One Hundred Sixty-Three Thousand Dollars (\$163,000.00) to NCDA&CS on or before June 12, 2015 by mailing a check to Audrey Pilkington, NCDA&CS, Food and Drug Protection Division, 1070 Mail Service Center, Raleigh, NC 27699-1070.

2) The parties agree that the balance of the civil penalty in the sum of One Hundred Sixty-Three Thousand Dollars (\$163,000.00) shall be held in abeyance for a term of two (2) years from the date of this agreement. During said term of two years, NCDA&CS will continue to routinely inspect Dollar General Stores in North Carolina. If during that two year period there is no evidence or documentation in multiple stores of rodent activity or adulterated products, payment of the remaining balance of the civil penalty in the sum of One Hundred Sixty-Three Thousand Dollars (\$163,000.00) will be forgiven.

3) If at any time during the two year abeyance period there is documentation or evidence of rodent activity or adulterated products in multiple Dollar General Stores, the balance of said civil penalty in the sum of One Hundred Sixty-Three Thousand Dollars (\$163,000.00) shall be due and payable to Audrey Pilkington at the address hereinabove stated within thirty days from the date NCDA&CS gives notice of such rodent activity or adulterated products.

4) For the purpose of this Settlement Agreement, evidence of rodent activity means documentation by NCDA&CS inspectors during an inspection of observations such as nesting, excreta, urine stains, gnawed packaging or food or other evidence of the presence of rodents within the store. Evidence of rodent activity **does not include** records collected and maintained by Dollar General, third party auditors or current pest control operator(s) that document the identification of rodent activity and demonstrate that the issue was promptly identified, documented, effectively corrected and monitored to ensure that the rodent activity was controlled and does not present an ongoing issue at the facility.

5) The parties agree and acknowledge that NCDA&CS is required by law to turn Dollar General payments over to the North Carolina Department of Public Instruction, retaining only such costs as are permitted by law.

6) If Dollar General receives notice from NCDA&CS that Dollar General is in material breach of this Settlement Agreement, and Dollar General fails to cure said material breach within such time as NCDA&CS may grant, Dollar General hereby agrees and stipulates that any unpaid portion of the civil penalty of Three Hundred Twenty-Six Thousand Dollars (\$326,000.00), less credit for payments made to NCDA&CS as provided herein, shall be immediately due and owing to NCDA&CS.

7) The parties mutually agree to act in good faith in the implementation of this Settlement Agreement. The parties agree to bear their own attorney's fees and costs. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth herein, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

8) The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

9) The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

10) North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have hereto set their hands and signatures on
the dates indicated below:

NORTH CAROLINA DEPARTMENT OF AGRICULTURE
AND CONSUMER SERVICES:

BY: Audrey Pilkington
Audrey Pilkington, Director,
Food & Drug Protection Division

DATE: June 23, 2015

DOLLAR GENERAL CORPORATION

BY: W. E. Boss

DATE: June 11, 2015

TITLE: VP Store Services

STATE OF NORTH CAROLINA

COUNTY OF WAKE:

Audrey Pilkington, Director, Food & Drug Division of the North Carolina Department of Agriculture and Consumer Services, personally appeared before me this day and duly executed the foregoing Settlement Agreement in duplicate originals for the purposes therein expressed.

Witness my hand and notarial seal this the 23 day of June, 2015.

Sharon Fiske
Notary Public

My Commission Expires:

12 / 19 / 2018

STATE OF Tennessee

COUNTY OF Davidson

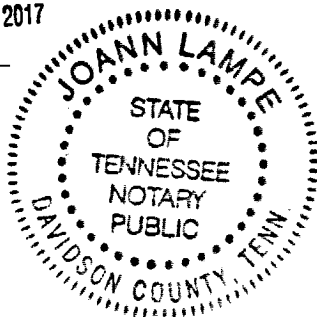
William Bass, VP Store Services of Dollar General Corporation,
personally appeared before me this day and duly executed the foregoing Settlement Agreement
in duplicate originals for the purposes therein expressed.

Witness my hand and notarial seal this the 11th day of June, 2015.

Joann Lampe
Notary Public

My Commission Expires:

My Commission Expires MAY 8, 2017



STATE OF NORTH CAROLINA
COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES MARKETING DIVISION
STATE FARMERS MARKET

IN THE MATTER OF DONALD
WILLIAMSON

SETTLEMENT AGREEMENT
RECITALS

This Settlement Agreement is made and entered into the date reflected opposite the signature of Ronnie Best, appearing below on page three, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter the "Department") and Donald Williamson (hereinafter "Mr. Williamson").

WITNESSETH:

WHEREAS, Mr. Williamson rented space to sale goods and produce at the State Farmers Market from February 1, 2018 – March 31, 2018 and agreed to pay daily rental at the rate of Fifteen Dollars (\$15.00) per day.

WHEREAS, Mr. Williamson rented space to sale goods and produce at the State Farmers Market from April 1, 2018 – June 30, 2018 agreed to pay daily rental at the rate of Twenty Dollars (\$20.00) per day.

WHEREAS, Mr. Williamson failed to pay the weekly rental rate from February 1, 2018 – June 30, 2018 and is currently indebted to the Department in the sum of Two Thousand Seven Hundred Five Dollars (\$2,705.00) for past due space rental.

WHEREAS, the Department has requested that Mr. Williamson pay the outstanding rent charges totaling Two Thousand Seven Hundred Five Dollars (\$2,705.00).

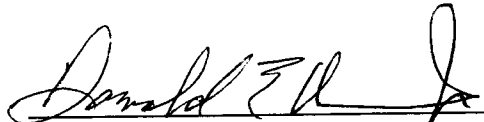
NOW, THEREFORE, IT IS RESOLVED THAT, in consideration of Mr. Williamson's promise to pay to the Department the sum of Two Thousand Seven Hundred Five Dollars, (\$2,705.00), in eight equal monthly payments of \$300.00 per month and one final payment of \$305.00 according to the terms set forth below, and the Department hereby agrees to waive interest and late fees, and for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Mr. Williamson shall pay the sum of \$2,705.00 in eight equal payments of \$300.00. and one final payment of \$305.00. Each payment shall be due and payable on the 5th day of the month, **with the first payment of \$300.00 due on November 5, 2018. The final**

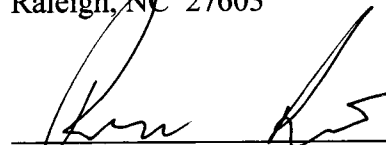
payment of \$305.00 shall be due on July 15, 2019. The Department shall deem Mr. Williamson's monthly payment as being received timely if Mr. Williamson sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the 5th day of the month in which that payment is due, properly addressed to Janine McLawhorn, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27601.

2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Williamson agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Mr. Williamson complies with the terms of this Settlement Agreement, the Department shall forbear from bringing a civil action against Mr. Williamson to collect the sum of money owed under the above-mentioned agreement and shall forbear from filing the Confession of Judgment Mr. Williamson has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, attached as Appendix I, only if Mr. Williamson fails to make a monthly payment on time, after giving Mr. Williamson notice by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. Williamson three business days to cure his breach by paying the amount due in full.
4. The Department further agrees that, once Mr. Williamson has paid his final monthly payment and the Department has received the \$2,705.00 in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Williamson a document confirming receipt of payment and releasing Mr. Williamson from further liability on this agreement and account. Further, the Department shall provide Mr. Williamson with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Williamson's breach of this Settlement Agreement.
5. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations, and agreements are merged into this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
6. The parties attest that this Settlement Agreement was voluntarily made after ample opportunity to review the document with any individuals, advisors, and counsel so desired.
7. This Settlement Agreement shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:

 10-10-18

Donald Williamson DATE
1411-1 Diggs Drive
Raleigh, NC 27603

 10/10/18

Ronnie Best DATE
Manager, State Farmers Market
1201 Agriculture Street
Raleigh, NC 27603

STATE OF NORTH CAROLINA

COUNTY OF UNION

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, DIVISION OF SOIL AND
WATER CONSERVATION

IN THE MATTER OF DOUGLAS KEZIAH.;

COST SHARE CONTRACT NO. 90-10-303-16

SETTLEMENT AGREEMENT

RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of Patricia K. Harris, appearing below on page 3, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter, "Department") and Douglas Keziah. (hereinafter "Mr. Keziah").

WITNESSETH:

WHEREAS, on April 14, 2011 Mr. Douglas Keziah. entered into a cost share contract agreement with the Division of Soil and Water Conservation ("DSWC") bearing contract number 90-10-303-16 (hereinafter the "agreement") for the installation, operation and maintenance of the waste storage structure installed pursuant to the above referenced cost share contract. The Department's Division of Soil and Water Conservation (hereinafter, "DWSC") approved this agreement and paid Mr. Keziah the sum of twenty-five thousand four hundred eight dollars (\$25,408.00) for the installation, operation and maintenance of the structure.

WHEREAS, pursuant to said cost share contract Mr. Keziah was required to maintain the waste storage structure for 10 years. In the event Mr. Keziah failed to maintain the structure for 10 years, he must repay a pro-rated amount of the total contract.

WHEREAS, on April 21, 2015, DWSC determined that Mr. Keziah had breached the cost share contract by storing items other than waste or waste handling equipment in the structure and by allowing waste to be stored outside the structure.

WHEREAS, the Department has requested that Mr. Keziah repay the pro-rated amount of the contract in the sum of eighteen thousand eight hundred dollars (\$18,802.00). The Department and Mr. Keziah desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

NOW, THEREFORE, IT IS RESOLVED that, in consideration of Mr. Keziah's promise to pay to the Department the sum of eighteen thousand eight hundred two


dollars in sixty equal monthly payments of \$313.37, according to the terms set forth below, and Department hereby agrees to release Mr. Keziah from any and all liability arising out of the dispute upon receipt of the final payment, and for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Mr. Keziah shall pay the sum stated above in sixty equal payments of \$313.37. Each payment shall be due and payable on the fifteenth of the month, **with the first payment due on February 15, 2016.** The Department shall deem Mr. Keziah's monthly payment as being received timely if Mr. Keziah sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the fifteenth day of the month in which that payment is due, properly addressed to Janine Owens, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Keziah agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Mr. Keziah complies with the terms of this Settlement Agreement, the Department shall forebear from bringing a civil action against Mr. Keziah to collect the sum of money he received under the above-mentioned agreement, and shall forebear from filing the Confession of Judgment Mr. Keziah has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, Appendix I, only if Mr. Keziah fails to make a monthly payment on time, after giving Mr. Keziah notice, by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. Keziah three business days to cure his breach by paying the amount due in full..
4. The Department further agrees that, once Mr. Keziah has paid his final monthly payment and Department has received Eighteen Thousand Eight Hundred Two Dollars (\$18,802.00) in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Keziah a document confirming receipt of payment and releasing Mr. Keziah from further liability on this agreement and account. Further, the Department shall provide Mr. Keziah with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Keziah's breach of this Settlement Agreement.
5. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.
6. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
7. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations and agreements are merged in this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.

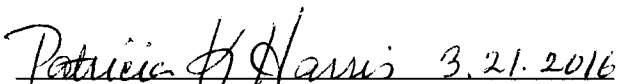
8. The parties attest that this Settlement Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.

9. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

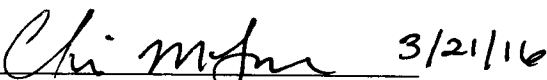
IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:



Douglas Keziah DATE
3301 Concord Hwy
Monroe, NC 28110



Patricia K. Harris, Director DATE
NCDA & CS Division of Soil and Water
Conservation
1614 Mail Service Center
Raleigh, NC 27699-1614



Christopher R. McLennan DATE
Assistant Attorney General
N. C. Department of Justice
PO BOX 629
Raleigh, NC 27602-0629

STATE OF NORTH CAROLINA

COUNTY OF DUPLIN

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, DIVISION OF SOIL AND
WATER CONSERVATION

IN THE MATTER OF DOUGLAS L. LANIER.;

COST SHARE CONTRACT NO. 52-11-09-09

SETTLEMENT AGREEMENT

RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of Vernon Cox, appearing below on page 3, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter, "Department") and Douglas L. Lanier. (hereinafter "Mr. Lanier").

WITNESSETH:

WHEREAS, on October 7, 2011 Mr. Douglas Lanier. entered into a cost share contract agreement with the Division of Soil and Water Conservation ("DSWC") bearing contract number 52-11-09-09 (hereinafter the "agreement") for the installation, operation and maintenance of a waste application system using a traveling gun irrigation system to apply the effluent from his swine lagoons more efficiently and to keep nutrients from entering and affecting the water quality of the Trent River pursuant to the above referenced cost share contract. The Department's Division of Soil and Water Conservation (hereinafter, "DWSC") approved this agreement and paid Mr. Lanier the sum of thirty-five thousand dollars (\$35,000.00) for the installation, operation and maintenance of the system.

WHEREAS, on August 31, 2017, DSWC determined that on two separate occasions the waste application system was not being used in accordance with the waste management plan and Mr. Lanier had breached said cost share contract.

WHEREAS, the Department has requested that Mr. Lanier repay the pro-rated amount of the contract in the sum of Nineteen Thousand Two Hundred Fifty Dollars (\$19,250.00). The Department and Mr. Lanier desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.


NOW, THEREFORE, IT IS RESOLVED that, in consideration of Mr. Lanier's promise to pay to the Department the sum of Nineteen Thousand Two Hundred Fifty Dollars (\$19,250.00) in fifty-five equal monthly payments of \$350.00, according to the terms set forth below, and Department hereby agrees to release Mr. Lanier from any and all liability arising out of the dispute upon receipt of the final payment, and

for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

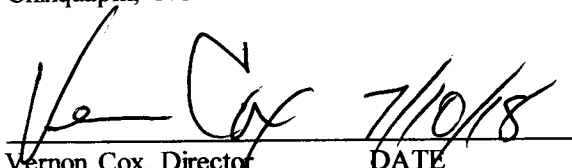
1. Mr. Lanier shall pay the sum stated above in fifty-five equal payments of \$350.00. Each payment shall be due and payable on the fifteenth of the month, **with the first payment due on May 15, 2018.** The Department shall deem Mr. Lanier's monthly payment as being received timely if Mr. Lanier sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the fifteenth day of the month in which that payment is due, properly addressed to Janine McLawhorn, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Lanier agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Mr. Lanier complies with the terms of this Settlement Agreement, the Department shall forebear from bringing a civil action against Mr. Lanier to collect the sum of money he received under the above-mentioned agreement, and shall forebear from filing the Confession of Judgment Mr. Lanier has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, Appendix I, only if Mr. Lanier fails to make a monthly payment on time, after giving Mr. Lanier notice, by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. Lanier three business days to cure his breach by paying the amount due in full.
4. The Department further agrees that, once Mr. Lanier has paid his final monthly payment and Department has received Nineteen Thousand Two Hundred Fifty Dollars (\$19,250.00) in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Lanier a document confirming receipt of payment and releasing Mr. Lanier from further liability on this agreement and account. Further, the Department shall provide Mr. Lanier with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Lanier's breach of this Settlement Agreement.
5. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.
6. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
7. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations and agreements are merged in this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
8. The parties attest that this Settlement Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.

9. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

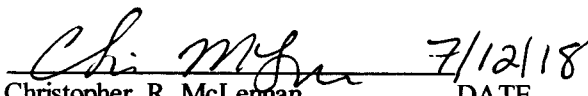
IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:



Douglas L. Lanier DATE
1809 Lyman Road 6-26-18
Chinquapin, NC 28521



Vernon Cox, Director DATE
NCDA & CS Division of Soil and Water
Conservation
1614 Mail Service Center
Raleigh, NC 27699-1614



Christopher R. McLennan DATE
Assistant Attorney General
N. C. Department of Justice
PO BOX 629
Raleigh, NC 27602-0629

14-02602

RELEASE FOR PROPERTY DAMAGE ONLY

I/WE Ellen Frank

For myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$20.00, I/We do hereby remise, release, and forever

discharge The State of North Carolina, NC Dept of Agriculture & Consumer Services and NC State Fair Division

and its, his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of DAMAGE TO PROPERTY (including loss of use thereof) arising out of an accident which occurred on or about the 22nd day of October, 2014, at or near Raleigh in the State of North Carolina. This release does not consider any verified hidden damages and or supplemental damages.

The above sum stated as a consideration of this Release is to be paid as follows:

\$20.00 To: Ellen Frank

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/~~we~~ have signed this Release at

3^{PM} Ellen Frank

In the State of North Carolina this 15th day of December, 2014.

IN THE PRESENCE OF

X Ellen Frank Signature

X Ellen Frank Print Name

X 1429 Opal Ct Address

X Raleigh, NC 27615 City/Zip

XSS#

X Karen Rosler Witness

X 4108 Morning Blossom Address

X Raleigh NC 27616 City/Zip

Thank you for your
concern and attention
to this unfortunate
situation/occurrence

AGREED TO:

Agency

By

David Meyer

STATE OF NORTH CAROLINA
COUNTY OF LINCOLN

NORTH CAROLINA DEPARTMENT
AGRICULTURE AND CONSUMER
SERVICES, MEAT AND POULTRY
INSPECTION DIVISION

IN THE MATTER OF EUGNE B. COLLINS
ALSO KNOWN AS E.B. COLLINS

CIVIL PENALTY ASSESSMENT FOR VIOLATION OF N.C. COMPULSORY MEAT AND
POULTRY INSPECTION LAWS

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. 150B-22 and 150B-41(c), which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, this agreement (the Agreement") is made and entered into on the date reflected opposite the signature of Dr. Beth Yongue, appearing below on page 3, by and between the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division (hereinafter the "Department") and Eugene B. Collins. (hereinafter "Mr. Collins").

R E C I T A L S:

WHEREAS, on October 11, 2016 Food Compliance Officer Phillip Renshaw visited Bargain Center Grocery in Lincolnton, North Carolina to perform a Planned Compliance Review. Compliance Officer Renshaw inspected the goods being offered for sale to the general public and discovered that the meat and poultry products being offered for sale were bearing an unauthorized U.S.D.A mark of inspection and the meat and poultry products were processed and packaged without the required inspection.

WHEREAS, On October 11, 2016, Mr. Collins, signed a statement dated October 11, 2016 stating that the misbranded meat products were purchased in large packages, which contained the U.S.D.A. mark of inspection and required labeling from A.L. Beck & Sons, Inc. (U.S.D.A. Est. #6639), Winston-Salem, North Carolina.

WHEREAS, Mr. Collins further stated in a signed statement dated October 11, 2016 that he processed, stored, offered for sale and sold the misbranded meat products to the general public in violation of General Statutes §106-549.23, and may be assessed a civil penalty of up to \$5,000.00 per violation.

WHEREAS, on November 3, 2016, the Department assessed Mr. Collins a civil penalty of Three Thousand Dollars (\$3,000.00) for violating General Statutes §106-549.23. Said Civil Penalty was mailed to Mr. Collins on November 3, 2016, certified mail, return receipt requested and received by Mr. Collins on November 7, 2016.

WHEREAS, The department has requested that Mr. Collins pay the said civil penalty in amount of Three Thousand Dollars (\$3,000.00) along with interest in the sum of \$189.45 and a late

payment penalty of \$300.00.

WHEREAS, as a result of settlement conversations and in an effort to resolve this matter to avoid the burden and expense of litigation, the Department and Mr. Collins desire to fully and finally compromise and settle any and all disputes and controversies arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, the Department and Mr. Collins agree as follows:

1. The Recitals set for above in this Agreement are hereby incorporated into this Agreement by reference as if fully set forth herein.
2. Mr. Collins shall pay the Department the sum of Three Thousand Four Hundred Eighty-Nine Dollars and Forty-Five Cents (\$3,489.45) in eleven (11) equal monthly payments of Three Hundred Dollars (\$300.00) each and one (1) final payment of \$189.45.
 - a. Each payment shall be due and payable on the fifteenth of the month, with the first payment due on June 15, 2018.
 - b. The Department shall deem Mr. Collins monthly payment as being received timely if Mr. Collins sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the fifteenth day of the month in which that payment is due, properly addressed to Janine McLawhorn, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.
3. As further evidence of good faith and as consideration for this Agreement, Mr. Collins agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement, which is hereby incorporated by reference.
4. The Department hereby agrees that, so long as Mr. Collins complies with the terms of this Agreement, the Department will not institute any civil action against Mr. Collins to collect the sum of money owed as a result of the November 3, 2016 civil penalty or file the Confession of Judgment Mr. Collins has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, Appendix I, only if Mr. Collins fails to make a monthly payment on time, after giving Mr. Collins notice of his failure to make said payment, and after allowing Mr. Collins three (3) business days to cure his breach by paying the amount due in full.
5. The Department further agrees that, once Mr. Collins has paid his final monthly payment and the Department has received Three Thousand Four Hundred Eighty-Nine Dollars and Forty-Five Cents (\$3,489.45) in satisfaction of the terms of this Agreement,

the Department shall provide to Mr. Collins a document confirming receipt of payment and releasing Mr. Collins from further liability on this Agreement and account. Further, the Department shall provide Mr. Collins with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Collins' breach of this Agreement.

6. The Department further agrees to release Mr. Collins from any and all liability arising out of the November 3, 2016 civil penalty upon receipt of the final payment.
7. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.
8. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
9. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations and agreements are merged in this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
10. The parties attest that this Settlement Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.
11. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:

Eugene B. Collins 6/16/18
Eugene B. Collins DATE
7828 Green Cove Court
Denver, NC 28037

Dr. Beth Yongue 07/13/18
Dr. Beth Yongue, Director DATE
NCDA&CS Meat and Poultry Inspection Division
1001 Mail Service Center
Raleigh, NC 27699-1614





CHERIE BERRY
COMMISSIONER OF LABOR

ROBBY JONES
WEST COMPLIANCE BUREAU CHIEF
OCCUPATIONAL SAFETY AND HEALTH DIVISION

February 16, 2015

Mr. David Smith
Chief Deputy Commissioner
N.C. Department of Agriculture and Consumer Services
1001 Mail Service Center
Raleigh, NC 27699

Re: Inspection No. 317837177, Executed Settlement Agreement

Dear Mr. Smith:

Enclosed is a copy of the executed settlement agreement between the North Carolina Department of Labor Occupational Safety and Health Division and the employer.

If you have already submitted your payment please disregard this paragraph. Upon receipt of this copy, please remit payment of penalties promptly to:

NC Department of Labor
ATTN: Budget - Collections
1101 Mail Service Center
Raleigh, NC 27699-1101

Pay online at www.nclabor.com. We accept MasterCard, VISA, E-Checks. You may also fax your payment to (919) 715-9094, or mail it to: N.C. Department of Labor, Budget and Management Division, 1101 Mail Service Center, Raleigh, NC 27699-1101.

If the settlement agreement includes a payment plan, the first payment is due on the first day of the month following the signing of the agreement. In the event that the employer does not pay each monthly installment as agreed upon, all remaining payments shall become immediately due and payable, and the Commissioner retains the right to institute collection proceedings as allowed by law.

Should you have questions regarding the settlement agreement, please feel free to call me at 828-299-8232. Thank you for your cooperation in providing a safe and healthful workplace for your employees.

Sincerely,


For Jennie Cagle
District Supervisor

Enclosure

204 CHARLOTTE HIGHWAY, SUITE B • ASHEVILLE, NORTH CAROLINA 28803-8681
828-299-8232 • FAX: 828-299-8266

**NORTH CAROLINA DEPARTMENT OF LABOR
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH**

OSH INSPECTION NO.
317837177

INFORMAL SETTLEMENT AGREEMENT

This Agreement is entered into by and between the Division of Occupational Safety and Health, North Carolina Department of Labor (hereinafter "OSH Division"), and the following employer:

N.C Department of Agriculture and Consumer Services dba N.C. Forest Service
(hereinafter "the Employer")

The OSH Division and the Employer specifically agree to the following items:

1. The Employer maintains a place of business at the following address:

3420 Playmore Beach Road
Lenoir, NC 28645

2. On August 13, 2014, an OSH Division compliance officer conducted an inspection at a worksite where one or more of the Employer's employees were performing work.

3. Based upon that inspection, the OSH Division issued a Citation and Notification of Penalty to the Employer (hereinafter referred to as a NCOSHA-2), on December 18, 2014 alleging a violation(s) of the Occupational Safety and Health Act of North Carolina and/or the standards and regulations promulgated thereunder.

4. This Agreement modifies the aforementioned NCOSHA-2 as follows:

- a. Citation 01, 001 – reduce penalty from \$5,000.00 to \$2,500.00.
- b. Citation items listed in the original NCOSHA-2 which are not hereby modified



shall remain in effect.

5. In consideration of this Agreement, the Employer agrees to:

a. Develop, implement, maintain and periodically update an effective and comprehensive safety and health program. As part of the safety and health program, the employer will conduct job hazard analyses of all tasks that might expose workers to hazards, to include the use of material handling equipment such as farm tractors and attachments. Revise existing safety and health program to thoroughly address issues resulting from this inspection;

b. Ensure that safety and health rules are enforced (by the employer) through regular, scheduled and unscheduled, worksite inspections and established, documented disciplinary procedures;

c. Conduct safety training, as necessary, to ensure that all employees are adequately trained in the recognition and control or avoidance of hazards associated with their work environment. Provisions will be made for periodic retraining as needed;

d. Continue any present safety program, including conducting periodic safety meetings with employees at regular intervals. The employer will actively encourage all workers to participate in workplace safety activities. During such meetings, employees should be able to communicate safety suggestions or complaints to their supervisor;

e. Certify that it has abated the above-referenced Citation Item(s) or will abate the above-referenced Citation Item(s) by the abatement date contained in such Citation(s);

f. Waive its rights under the Occupational Safety and Health Act of North Carolina, N.C.G.S. '95-126 to 155, to contest any citation item(s), penalty(ies), or abatement date(s) listed on the NCOSHA-2 before the Safety and Health Review Commission of North Carolina and/or any other tribunal.

6. The parties agree that this Agreement is a full and final settlement of all the claims set

out in the underlying NCOSHA-2, and none of the foregoing agreements, statements or actions taken by the Employer shall be deemed an admission by the Employer of any of the allegations contained in the NCOSHA-2. The parties agree that in any subsequent proceeding brought by the North Carolina Department of Labor regarding matters covered by the Occupational Safety and Health Act of North Carolina or any matter involving the Retaliatory Employment Discrimination Act (Chapter 95, Article 21 of the North Carolina General Statutes), this Agreement shall have the full force and effect of a Final Order. The agreements, statements and actions taken herein are made solely for the purpose of settling this matter economically and amicably without litigation and shall not be used for any other purpose except for proceedings and matters arising under the Occupational Safety and Health Act of North Carolina or Article 21, Chapter 95 of the North Carolina General Statutes. This Agreement has been entered into prior to any notification by the Employer of the intent to contest a citation or the filing by the Employer of any notice relating to the time period established for abatement.

7. The parties agree to bear their own attorneys' fees, costs and other expenses incurred to date in this matter.

8. Pay the total penalty assessment of \$2,500.00 within 10 days of signing this agreement and return confirmation of abatements as necessary.

9. This Agreement shall be prominently posted at or near such place(s) any violation(s) referred to in the original citation occurred and in close proximity to that original citation.

WHEREFORE, the undersigned parties enter into and execute this Agreement.

This the 16 day of February, 2015.

For the OSH Division:
North Carolina Department of Labor

For the Employer:

Kristie Hall
Signature

N. David Smith
Signature

For
Jennie Cagle, NC OSH Compliance Supervisor
Printed Name/Title

N. David Smith, Chief Deputy Commissioner
Printed Name/Title

FULL AND FINAL SETTLEMENT AGREEMENT

THIS AGREEMENT made and entered into by and between **THE STATE OF NORTH CAROLINA**, by and through **NORTH CAROLINA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES** ("DACS") and **N. C. MONROE CONSTRUCTION COMPANY** ("Monroe").

WHEREAS, Monroe as general contractor constructed for DACS the Piedmont Triad Farmers Market (the "Project"); and

WHEREAS, a dispute has arisen as to construction of the Project; and

WHEREAS, there is currently pending in the Superior Court of Wake County civil action 11 CVS 7076 (the "Proceeding"); and

WHEREAS, the parties hereto have reached a settlement and resolution of all complaints, claims and disputes in connection with the Project and the Proceeding, under the terms and conditions set out hereafter;

NOW, THEREFORE, for Ten Dollars (\$10) and other good and valuable consideration and the terms set out hereafter, the sufficiency of which is hereby acknowledged, the parties agree as follows:

1. The Work. Monroe agrees to perform the work (the "Work") generally described as the attachment of vertical wooden support members on both sides of the exterior of certain truck bay doors in Building F of the Project as more particularly shown on the sealed drawings prepared by Walter T. Wilson ("Engineer"), a copy of which is attached hereto as Exhibit A and made a part hereof. The North Carolina State Construction Office ("SCO") has reviewed and approved the attached plans for construction.

2. Time of Performance and Performance. Monroe shall commence construction of the work within a reasonable time not to exceed 60 days from the execution of this agreement so as to allow for the ordering of materials and staging of work. Once the Work is commenced, Monroe will use commercially reasonable efforts to obtain substantial completion within sixty (60) days of commencement, weather and site conditions permitting. Monroe will also use commercially reasonable efforts to minimize disruption of DACS's tenants' operations in the building. DACS will be responsible for coordinating the Work with its tenants and the movement of the tenants' fixtures, equipment and products so as not interfere with Monroe's schedule or sequence of the Work and to allow Monroe reasonable access to perform the Work in the manner and sequence planned. DACS will also be responsible for ensuring that the tenants do not interfere with Monroe's Work and observe restricted construction areas while work is being performed. It is further understood that Monroe will coordinate the Work with DACS to minimize interference with the Work and/or tenants' operations. However, DACS cannot represent that it can control all actions or activities by tenants and/or visitors to Building F, but DACS will provide tenants and visitors with reasonable notice of the Work. Monroe shall be entitled to communicate with the DACS on-site manager for purposes of coordination of the Work with DACS and the tenants and visitors. The Work will be performed by Monroe Construction Group, LLC, which will provide a certificate of general liability insurance.

3. Observation and Certification. The progress of the work will be observed by the Engineer for compliance with the attached plans, with such frequency as the Engineer deems appropriate. Upon completion of the work to his satisfaction, the Engineer will prepare and deliver to DACS a certification that to his observation and knowledge the completed work complies with all applicable requirements of the plans and applicable codes and further that Building F is in compliance with all currently applicable building code requirements pertaining to wind loads. The cost of the Engineer's services shall be borne by Monroe. The work required to complete the scope of Work set forth in the attached plans shall be undertaken and completed at Monroe's sole cost and expense. The work may also be inspected by SCO, which may also inspect the completed work and accept such work on behalf of the State, which acceptance shall not be unreasonably withheld.
4. Change Orders. Any work required outside the express scope of the attached plans shall constitute a change order. The cost of any such additional work (including additional engineering fees) shall be advanced by DACS prior to any such work being performed, and shall be a condition precedent thereof. Monroe proposes to install similar timbers on either side of one additional sectional door on the parking lot side of Building F, which was determined by Mr. Wilson not to require timbers, for a total cost of \$2,416.38. DACS accepts Monroe's proposal for this additional work. As a condition precedent of Monroe performing such additional work, DACS will deposit such amount with the Brooks Pierce, which funds will be released to Monroe in accordance with the conditions set forth in

Paragraph 8 below (i.e. certification of completion or arbitration award, whichever is later)

5. Work to be Accepted "AS IS". Upon completion of the Work, issuance of the certification described above by the Engineer, and acceptance of the Work by SCO, which acceptance shall not unreasonably be withheld, or as provided in paragraph 8, DACS and the State shall be deemed to have accepted the Work performed and the rest of the Project "as is" without warranty or further obligation on Monroe's, its affiliates' or sureties' behalf. Neither the performance of this Work nor anything in this agreement shall recommence or extend any applicable statutes of limitation or repose in connection with the Project.
6. Release of Monroe. Except for the obligations specifically set forth in this Agreement, the State of North Carolina by and through, DACS, Department of Insurance, and State Insurance Fund, shall release Monroe, and its employees, agents, officers, shareholders, representatives, consultants, attorneys, affiliates and sureties from all claims, demands, causes of action and suits, whether known or unknown, accrued or unaccrued, of any kind, including but not limited to those pertaining to or arising out of the Project and the Proceeding. This release shall become effective in accordance with the conditions set forth in Paragraph 8 below (i.e., certification of completion or arbitration award, whichever is later). This release shall not apply to future claims between the parties that do not arise from or relate to the Project and/or litigation.
7. Release of DACS. Except for the obligations specifically set forth in this Agreement, Monroe releases DACS, and its employees, agents, officers,

representatives, consultants, and attorneys from all claims, demands, causes of action and suits, whether known or unknown, accrued or unaccrued, of any kind, including but not limited to those pertaining to or arising out of the Project and the Proceeding. This release shall become effective in accordance with the conditions set forth in Paragraph 8 below (i.e., certification of completion or arbitration award, whichever is later). This release shall not apply to future claims between the parties that do not arise from or relate to the Project and/or litigation.

8. Dismissal with Prejudice. The State shall execute the Dismissal with Prejudice attached hereto as Exhibit B. Within twenty days of completion of the work and certification by the Engineer, DACS will file the original, executed Dismissal with Prejudice with the Wake County Superior Court and deliver a time-stamped copy of said Dismissal. Provided, however, that if SCO provides a punch list of items it deems necessary to complete the Work as required by this Agreement, the Dismissal with Prejudice shall be filed within ten (10) days of certification by the Engineer of completion of the punch list. In the event that Monroe contends that the punch list or some of the items thereon, provided by SCO is outside the scope of this Agreement or that SCO's approval of the Work has been unreasonably withheld, the dispute shall be submitted to the American Arbitration Association for final determination under the Construction Industry Arbitration Rules, Fast Track Procedure, for binding arbitration. In the event Monroe prevails, the Dismissal with Prejudice will be filed within ten (10) days of the filing of the award. If DACS prevails, the arbitrator will set forth in the award the work on

Building F needed to be performed by Monroe to complete the Work required by this Agreement, and Monroe shall within a reasonable time complete the remaining work proscribed by the arbitrator. Within ten (10) days from completion as determined by the Engineer of the work so proscribed, DACS will file the Voluntary Dismissal with Prejudice. The losing party shall pay all arbitration costs.

9. No Admission of Fault or Liability. This Agreement is being entered into by Monroe in order to resolve an outstanding, contested dispute and not as an admission by Monroe of any fault, obligation or liability in connection with the construction of the Project or the Proceeding.
10. Entire Agreement. This Agreement constitutes the entire understanding of the parties and incorporates any and all previous negotiations or discussions. It is the intention of the parties that this Agreement constitutes settlement and resolution of all disputes in connection with the Project and the Proceeding. The sole remedy any party may hereafter have will be the enforcement of this Agreement.
11. Enforceability of Agreement. Failure by any of the Parties to enforce any of the remedies provided to it in this Agreement shall not be deemed to be a waiver of those rights. If any part or provision of this Agreement is determined by a court of competent jurisdiction to be invalid or unenforceable, such determination shall not affect the validity or enforceability of any other part or provision hereof.
12. Choice of Laws. This Agreement shall be construed, performed, and enforced under the laws of the North Carolina, without regard to any applicable conflict or choice of law provision, rule, law and/or statute.

13. Voluntarily Agreement. The Parties acknowledge that they have consulted with legal counsel of their choosing before entering into this Agreement, have read this Agreement, know and understand its contents, and execute this Agreement freely and voluntarily. In executing and giving this Agreement, each party acknowledges that it has not relied on, or made to any other party or anyone purporting to act on its behalf, any promise or representation that is not in this Agreement, each party acknowledges that it has not relied on, or made to any other party or anyone purporting to act on its behalf, any promise or representation that is not in this Agreement.
14. Authority to Execute. The undersigned representatives for the Parties to this Agreement have been duly authorized to sign on behalf of their respective Parties and to bind them to the terms and conditions of this Agreement.
15. Effect of Agreement. This Agreement shall be binding on, and inure to the benefit of, each of the Parties and all of their respective successors and/or assigns.
16. Negotiated Agreement. This Agreement was the result of a negotiated Agreement and shall not be construed as having been prepared by any one party.
17. Execution in Counterparts. This Agreement may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Agreement, and all of which, when taken together, will be deemed to constitute one and the same Agreement.

The remainder of this page has been left blank intentionally

18. Effective Date. This Agreement shall be dated and effective as of the last date of execution of the parties as shown below.

STATE OF NORTH CAROLINA
By and through NORTH CAROLINA
DEPARTMENT OF AGRICULTURE AND
CONSUMER SERVICES

By 
Chief Deputy Commissioner

Dated: 8-20-2014

N. C. MONROE CONSTRUCTION
COMPANY

By 
Vice President

Dated: 9-17-14

WILSON AND LYSIAK, INC
1030 E. WENDOVER AVE.
GREENSBORO, NC 27405
TEL: 336-275-1338
FAX: 336-275-2636

WALTER T. WILSON P.E.
ROBERT J. LYSIAK P.E.

September 6, 2014

Mike Meeker
Brooks, Pierce, McLendon, Humphrey & Leonard
P.O. Box 1800
Raleigh, NC 27602

RE: Piedmont Triad Farmers Market – Code Concerns

Dear Mike,

At the May 28, 2014 meeting at State Construction the following issues were raised:

1. I was to recheck to verify that no reinforcing was required at the door between 3 and 4.

Response: There are two sets of steel stairs on the west end of the building that provide lateral support to the exterior walls between the last doors and the two story portion of the building. There is no need to provide any additional reinforcing in this area.

2. I was to provide a more detailed specification for the wooden timbers.

Response: The Contractor is aware that I am going to require shop drawings on this material with written certifications of the moisture content and the treatment provided. I have also advised him that I want to make a visual inspection of the material before it is sent to the job.

3. I was to make provision for size of hole to be drilled in timbers to allow for timber expansion and contraction.

Response: I contacted Bruce Lindsey who is the Southeast Regional Director for the Wood Products Council to get his opinion on this matter. Bruce turned this over to his "help desk research" staff and I have attached his E-mail with the four pages of information he attached. In my opinion the normal clearances in the field will be adequate.

4. I was to look at the need (if any) for reinforcing of the 12-inch walls at both ends of the building.

Response: Both ends of the building are constructed with 12-inch masonry walls which do not required reinforcing. The west end has an elevated floor that provides lateral support. The east end has a double wall at the door jambs that provides additional support.

Sincerely:



Walter T. Wilson, P.E.

Attached: 5 pages

Tom Wilson

From: Bruce Lindsey [bruce@woodworks.org]
Sent: Monday, June 02, 2014 3:47 PM
To: Tom Wilson
Cc: Kevin Rosensky
Subject: Shrinkage Follow up
Attachments: Shrinkage Pages from 2010-WoodHandbook-WoodAsAnEngineeringMaterial fpl_gtr190 (2).pdf

Tom

I had my help desk research the longitudinal shrinkage coefficient. They couldn't find one but here's the best info they could find. In the longitudinal direction the wood only shrinks from saturation to bone dry in volume an average of 0.1% to 0.2% depending upon species. Your posts, if kiln dried after treating, will be far below maximum saturation and only dry to about 12%. I think you can safely and conservatively assume the length of those beams will shrink far less than 0.1% so you can expect less than 1/8" of shrinkage when measured from end to end. Your threaded rod holes will have more slop than that amount of shrinkage so you should have no worries related to longitudinal shrinkage.

Let me know if I can do anything else to help.

Thanks,

Bruce

Bruce Lindsey

WoodWorks – Wood Products Council

Southeast Regional Director – Design & Construction Services

1444 River Dr. | Belmont | NC | 28012

Tel: 704-877-6255

Email: bruce@woodworks.org | Web: www.woodworks.org

Follow WoodWorks: [LinkedIn](#)

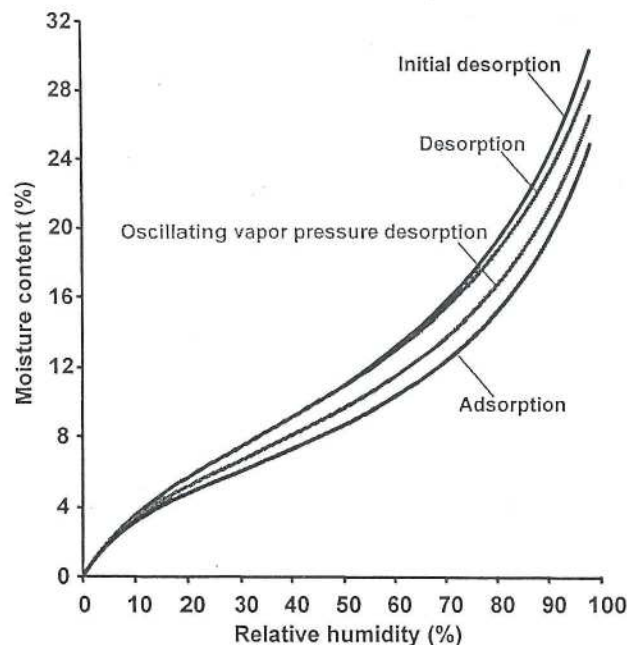


Figure 4-2. Moisture content–relative humidity relationship for wood under adsorption and various desorption conditions.

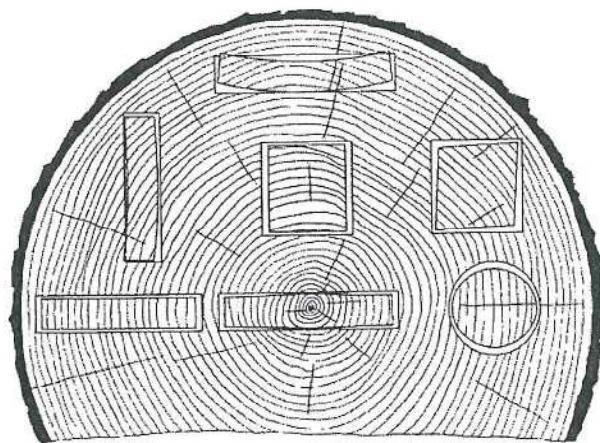


Figure 4-3. Characteristic shrinkage and distortion of flat, square, and round pieces as affected by direction of growth rings. Tangential shrinkage is about twice as great as radial.

subjected to unit difference in moisture concentration (kg m^{-3}) across unit thickness (m). An order-of-magnitude estimate of D_w can be made using the value of A_w as

$$D_w \approx \left(\frac{A_w}{c_{\text{sat}}} \right)^2 \quad (4-6)$$

where c_{sat} is the moisture concentration (kg m^{-3}) in water-saturated wood (Kumaran 1999).

Dimensional Stability

Wood is dimensionally stable when moisture content is greater than the fiber saturation point. Below MC_{fs} wood changes dimension as it gains moisture (swells) or loses moisture (shrinks), because volume of the cell wall depends on the amount of bound water. This shrinking and swelling can result in warping, checking, and splitting of the wood, which in turn can lead to decreased utility of wood products, such as loosening of tool handles, gaps in flooring, or other performance problems. Therefore, it is important that the dimensional stability be understood and considered when a wood product will be exposed to large moisture fluctuations in service.

With respect to dimensional stability, wood is an anisotropic material. It shrinks (swells) most in the direction of the annual growth rings (tangentially), about half as much across the rings (radially), and only slightly along the grain (longitudinally). The combined effects of radial and tangential shrinkage can distort the shape of wood pieces because of the difference in shrinkage and the curvature of annual rings. The major types of distortion as a result of these effects are illustrated in Figure 4-3.

Transverse and Volumetric Shrinkage

Data have been collected to represent the average radial, tangential, and volumetric shrinkage of numerous domestic species by methods described in American Society for Testing and Materials (ASTM) D 143—Standard Test Methods for Small Clear Specimens of Timber (ASTM 2007). Shrinkage values, expressed as a percentage of the green dimension, are listed in Table 4-3. Shrinkage values collected from the world literature for selected imported species are listed in Table 4-4.

The shrinkage of wood is affected by a number of variables. In general, greater shrinkage is associated with greater density. The size and shape of a piece of wood can affect shrinkage, and the rate of drying can affect shrinkage for some species. Transverse and volumetric shrinkage variability can be expressed by a coefficient of variation of approximately 15% (Markwardt and Wilson 1935).

Longitudinal Shrinkage

Longitudinal shrinkage of wood (shrinkage parallel to the grain) is generally quite small. Average values for shrinkage from green to oven-dry are between 0.1% and 0.2% for most species of wood. However, certain types of wood exhibit excessive longitudinal shrinkage, and these should be avoided in uses where longitudinal stability is important. Reaction wood, whether compression wood in softwoods or tension wood in hardwoods, tends to shrink excessively parallel to the grain. Wood from near the center of trees (juvenile wood) of some species also shrinks excessively lengthwise. Reaction wood and juvenile wood can shrink 2% from green

Table 4-3. Shrinkage values of domestic woods

Species	Shrinkage ^a (%) from green to oven-dry moisture content			Species	Shrinkage ^a (%) from green to oven-dry moisture content		
	Radial	Tangential	Volumetric		Radial	Tangential	Volumetric
Hardwoods				Oak, white—con.			
Alder, red	4.4	7.3	12.6	Chestnut	5.3	10.8	16.4
Ash				Live	6.6	9.5	14.7
Black	5.0	7.8	15.2	Overcup	5.3	12.7	16.0
Blue	3.9	6.5	11.7	Post	5.4	9.8	16.2
Green	4.6	7.1	12.5	Swamp, chestnut	5.2	10.8	16.4
Oregon	4.1	8.1	13.2	White	5.6	10.5	16.3
Pumpkin	3.7	6.3	12.0	Persimmon, common	7.9	11.2	19.1
White	4.9	7.8	13.3	Sassafras	4.0	6.2	10.3
Aspen				Sweetgum	5.3	10.2	15.8
Bigtooth	3.3	7.9	11.8	Sycamore, American	5.0	8.4	14.1
Quaking	3.5	6.7	11.5	Tanoak	4.9	11.7	17.3
Basswood, American	6.6	9.3	15.8	Tupelo			
Beech, American	5.5	11.9	17.2	Black	5.1	8.7	14.4
Birch				Water	4.2	7.6	12.5
Alaska paper	6.5	9.9	16.7	Walnut, black	5.5	7.8	12.8
Gray	5.2	—	14.7	Willow, black	3.3	8.7	13.9
Paper	6.3	8.6	16.2	Yellow-poplar	4.6	8.2	12.7
River	4.7	9.2	13.5	Softwoods			
Sweet	6.5	9.0	15.6	Cedar			
Yellow	7.3	9.5	16.8	Yellow	2.8	6.0	9.2
Buckeye, yellow	3.6	8.1	12.5	Atlantic white	2.9	5.4	8.8
Butternut	3.4	6.4	10.6	Eastern redcedar	3.1	4.7	7.8
Cherry, black	3.7	7.1	11.5	Incense	3.3	5.2	7.7
Chestnut, American	3.4	6.7	11.6	Northern white	2.2	4.9	7.2
Cottonwood				Port-Orford	4.6	6.9	10.1
Balsam poplar	3.0	7.1	10.5	Western redcedar	2.4	5.0	6.8
Black	3.6	8.6	12.4	Douglas-fir,			
Eastern	3.9	9.2	13.9	Coast ^b	4.8	7.6	12.4
Elm				Interior north ^b	3.8	6.9	10.7
American	4.2	9.5	14.6	Interior west ^b	4.8	7.5	11.8
Cedar	4.7	10.2	15.4	Fir			
Rock	4.8	8.1	14.9	Balsam	2.9	6.9	11.2
Slippery	4.9	8.9	13.8	California red	4.5	7.9	11.4
Winged	5.3	11.6	17.7	Grand	3.4	7.5	11.0
Hackberry	4.8	8.9	13.8	Noble	4.3	8.3	12.4
Hickory, pecan	4.9	8.9	13.6	Pacific silver	4.4	9.2	13.0
Hickory, true				Subalpine	2.6	7.4	9.4
Mockernut	7.7	11.0	17.8	White	3.3	7.0	9.8
Pignut	7.2	11.5	17.9	Hemlock			
Shagbark	7.0	10.5	16.7	Eastern	3.0	6.8	9.7
Shellbark	7.6	12.6	19.2	Mountain	4.4	7.1	11.1
Holly, American	4.8	9.9	16.9	Western	4.2	7.8	12.4
Honeylocust	4.2	6.6	10.8	Larch, western	4.5	9.1	14.0
Locust, black	4.6	7.2	10.2	Pine			
Madrone, Pacific	5.6	12.4	18.1	Eastern white	2.1	6.1	8.2
Magnolia				Jack	3.7	6.6	10.3
Cucumbertree	5.2	8.8	13.6	Loblolly	4.8	7.4	12.3
Southern	5.4	6.6	12.3	Lodgepole	4.3	6.7	11.1
Sweetbay	4.7	8.3	12.9	Longleaf	5.1	7.5	12.2
Maple				Pitch	4.0	7.1	10.9
Bigleaf	3.7	7.1	11.6	Pond	5.1	7.1	11.2
Black	4.8	9.3	14.0	Ponderosa	3.9	6.2	9.7
Red	4.0	8.2	12.6	Red	3.8	7.2	11.3
Silver	3.0	7.2	12.0	Shortleaf	4.6	7.7	12.3
Striped	3.2	8.6	12.3	Slash	5.4	7.6	12.1
Sugar	4.8	9.9	14.7	Sugar	2.9	5.6	7.9
Oak, red				Virginia	4.2	7.2	11.9
Black	4.4	11.1	15.1	Western white	4.1	7.4	11.8
Laurel	4.0	9.9	19.0	Redwood			
Northern red	4.0	8.6	13.7	Old growth	2.6	4.4	6.8
Pin	4.3	9.5	14.5	Young growth	2.2	4.9	7.0
Scarlet	4.4	10.8	14.7	Spruce			
Southern red	4.7	11.3	16.1	Black	4.1	6.8	11.3
Water	4.4	9.8	16.1	Engelmann	3.8	7.1	11.0
Willow	5.0	9.6	18.9	Red	3.8	7.8	11.8
Oak, white				Sitka	4.3	7.5	11.5
Bur	4.4	8.8	12.7	Tamarack	3.7	7.4	13.6

^aExpressed as a percentage of the green dimension.^bCoast type Douglas-fir is defined as Douglas-fir growing in the States of Oregon and Washington west of the summit of the Cascade Mountains. Interior West includes the State of California and all counties in Oregon and Washington east of but adjacent to the Cascade summit. Interior North includes the remainder of Oregon and Washington and the States of Idaho, Montana, and Wyoming.

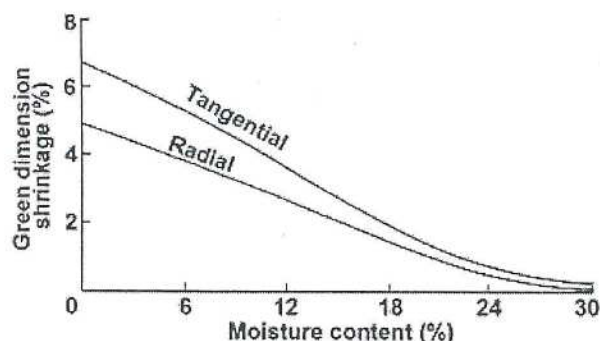


Figure 4-4. Typical moisture content–shrinkage curves.

to ovendry. Wood with cross grain exhibits increased shrinkage along the longitudinal axis of the piece.

Reaction wood exhibiting excessive longitudinal shrinkage can occur in the same board with normal wood. The presence of this type of wood, as well as cross grain, can cause serious warping, such as bow, crook, or twist, and cross breaks can develop in the zones of high shrinkage.

Relationship between Moisture Content and Shrinkage

For a sufficiently small piece of wood without moisture gradients, shrinkage normally begins at about the fiber saturation point and continues in a fairly linear manner until the wood is completely dry. However, in the normal drying of lumber or other large pieces, the surface of the wood dries first, causing a moisture gradient. When the surface MC drops below the fiber saturation point, it begins to shrink even though the interior can still be quite wet and not shrink. Because of moisture gradients, shrinkage of lumber can occur even when the average moisture content of the entire piece of lumber is above fiber saturation. With moisture gradients, the moisture content–shrinkage relationship is not linear but rather looks similar to the one in Figure 4-4. The exact form of the shrinkage curve with moisture gradients depends on several variables, principally size and shape of the piece, species of wood, and drying conditions used.

Considerable variation in shrinkage occurs for any species. Tangential shrinkage data for Douglas-fir boards, 22 by 140 mm (7/8 by 5-1/2 in.) in cross section, are given in Figure 4-5 (Comstock 1965). The material was grown in one locality and dried under mild conditions from green to near equilibrium at 32 °C (90 °F) and two different humidity conditions: (1) 60–65% RH and (2) 30% RH. The figure shows that accurately predicting the shrinkage of an individual piece of wood is impossible; however, the average shrinkage of a quantity of pieces can be predicted accurately.

Average shrinkage data in Tables 4-3 and 4-4 can be used to estimate shrinkage for a particular species if a great deal

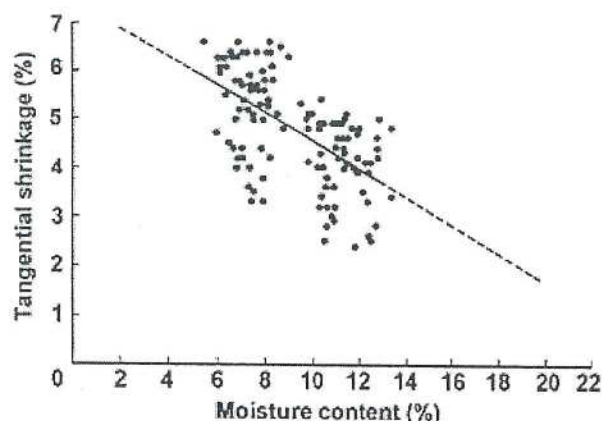


Figure 4-5. Variation in individual tangential shrinkage values of several Douglas-fir boards from one locality, dried from green condition.

of accuracy is not required. The following assumptions are made: (1) shrinkage begins at the fiber saturation point MC_{fs} , and (2) dimensions decrease linearly with decreasing moisture content. The percent shrinkage S_x from the green condition to final moisture content x can be calculated from

$$S_x = S_0 \left(1 - \frac{x}{MC_{fs}} \right) \quad (4-7)$$

where S_0 is percent shrinkage from the green condition to ovendry (radial, tangential, or volumetric) from Table 4-3 or 4-4. If MC_{fs} is not known, 30% MC can be used as an approximation. Tangential values for S_0 should be used for estimating width shrinkage of plainsawn material and radial values for quartersawn material. For mixed or unknown ring orientations, tangential values are suggested. Shrinkage values for individual pieces will vary from predicted shrinkage values. As noted previously, shrinkage variability is characterized by a coefficient of variation of approximately 15%. This applies to pure tangential or radial ring orientation and is probably somewhat greater in commercial lumber, where ring orientation is seldom aligned perfectly parallel or perpendicular to board faces. Chapter 13 contains additional discussion of shrinkage–moisture content relationships, including a method to estimate shrinkage for the relatively small moisture content changes of wood in service. Shrinkage assumptions for commercial lumber, which typically is not perfectly plainsawn or quartersawn, are discussed in Chapter 7.

Density and Specific Gravity

The density ρ of a substance is defined as the ratio of its mass to its volume and is expressed in the international system (SI) in units of kilograms per cubic meter (kg m^{-3}), in the inch–pound system (I–P) in units of pounds per cubic foot (lb ft^{-3}), or in the centimeter–gram–second system (CGS) in units of grams per cubic centimeter (g cm^{-3}). The

START AT 19% IF KDAT (MOISTURE CONTENT)

ASSUME 12% MC AFTER THE MATERIAL STABILIZES

Calculating Shrinkage

(19% - 12%) = 7% CHANGE

IN MOISTURE CONTENT

For MC between 6 to 14% the formula is:

$$S = D_i [C_T (M_F - M_i)]$$

S = shrinkage (in inches)

D_i = initial dimension (in inches)

C_T / C_R = dimension change coefficient, tangential/radial direction

$C_T = 0.00319$ for Douglas Fir-Larch

$C_T = 0.00323$ for Hem-Fir

$C_T = 0.00263$ for Spruce-Pine-Fir

$C_T = 0.00263$ for Southern Pine

M_F = final moisture content (percent)

M_i = initial moisture content (percent)

FOR ~~SHRINKAGE~~
SHRINKAGE AT THREADED ROD

THIS IS THE TANGENTIAL IN CHANGE COEFFICIENT. TRYING TO FIND LONGITUDINAL

$$S = 8" [0.00263 (12\% - 19\%)]$$

$$S = .14728"$$

OR APPROX 1/8"

BRUCE 704-877-6255

STATE OF NORTH CAROLINA

IN THE GENERAL COURT OF JUSTICE

COUNTY OF WAKE

SUPERIOR COURT DIVISION

11 CvS 007076

STATE OF NORTH CAROLINA through the)
NORTH CAROLINA DEPARTMENT OF)
AGRICULTURE AND CONSUMER SERVICES,)

Plaintiff,)

v.)

N. C. MONROE CONSTRUCTION COMPANY)
and TRAVELERS CASUALTY & SURETY)
COMPANY OF AMERICA as successor to)
RELIANCE INSURANCE COMPANY)

Defendants.)

NOTICE OF VOLUNTARY
DISMISSAL OF ALL
DEFENDANTS
WITH PREJUDICE

Pursuant to Rule 41(a) of the North Carolina Rules of Civil Procedure, Plaintiff by and through its undersigned counsel, voluntarily dismisses all of the claims against N.C. MONROE CONSTRUCTION COMPANY and TRAVELERS CASUALTY & SURETY COMPANY OF AMERICA as successor to RELIANCE INSURANCE COMPANY in the above captioned matter with prejudice.

Respectfully submitted this ____ day of _____, 2014.

Plaintiff State of North Carolina through
Attorney General Roy Cooper

EXHIBIT B

Durwin P. Jones
Assistant Attorney General
State Bar No. 30462
North Carolina Department of Justice
P. O. Box 629
Raleigh, NC 27602
Telephone: 919.633.7408
djones@ncdojgov.

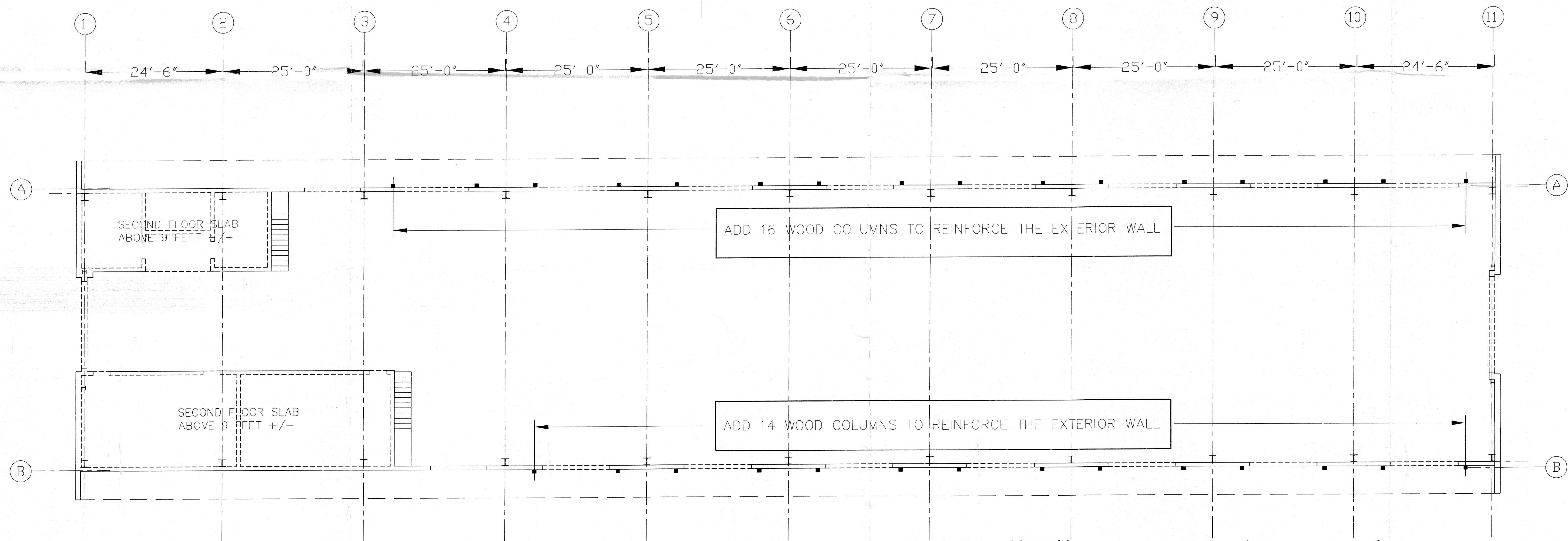
CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Notice of Voluntary Dismissal of All Defendants With Prejudice has been served on Defendants' attorneys on this the ____ day of _____, 2014, by first-class mail, postage prepaid, addressed as follows:

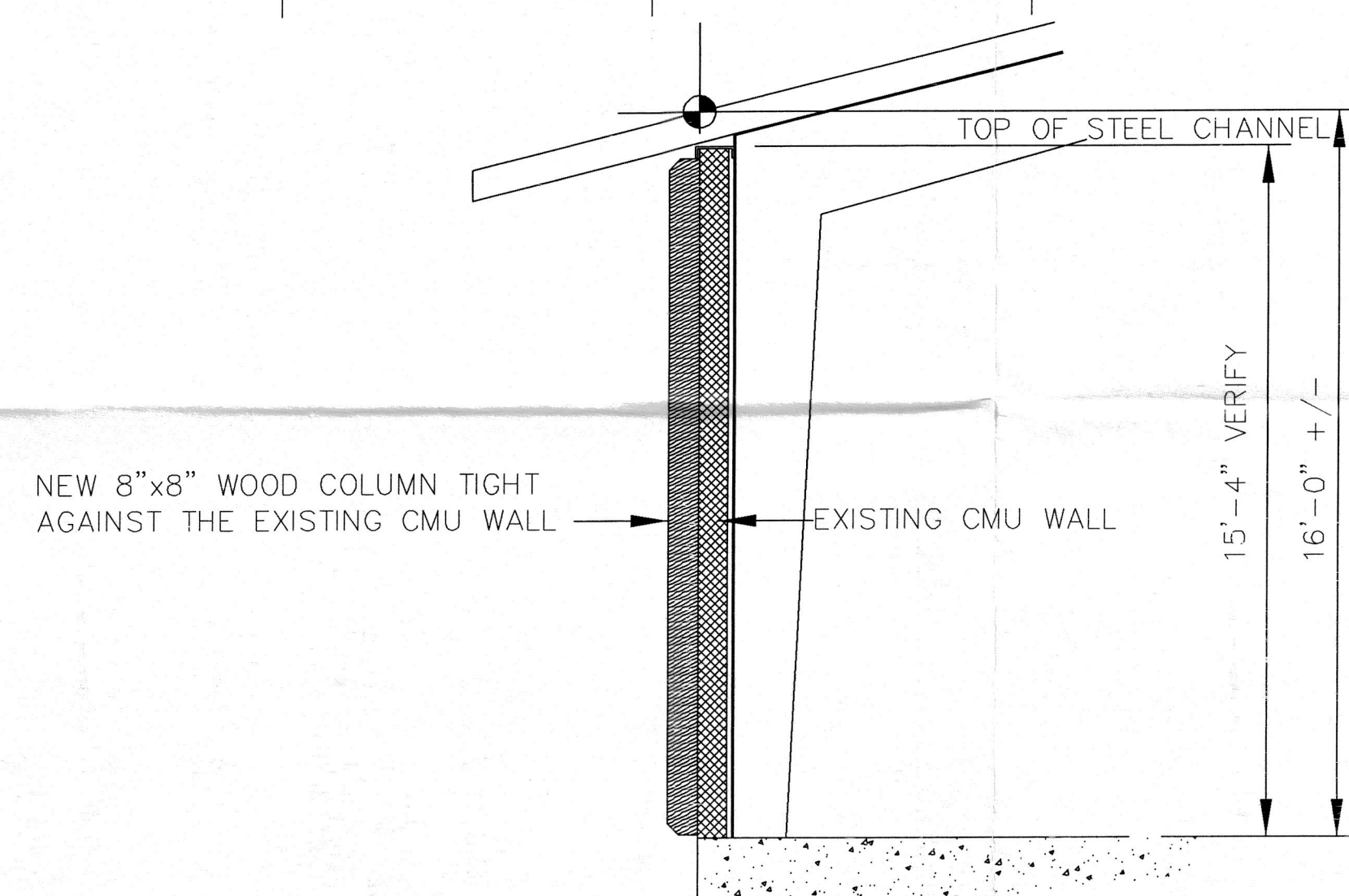
Michael D. Meeker
Joseph A. Ponzi
Brooks, Pierce, McLendon, Humphrey & Leonard, LLP
P. O. Box 26000
Greensboro, NC 27420-6000

Attorneys for N. C. Monroe Construction Company and Travelers Casualty & Surety Company of America, successors to Reliance Insurance Company

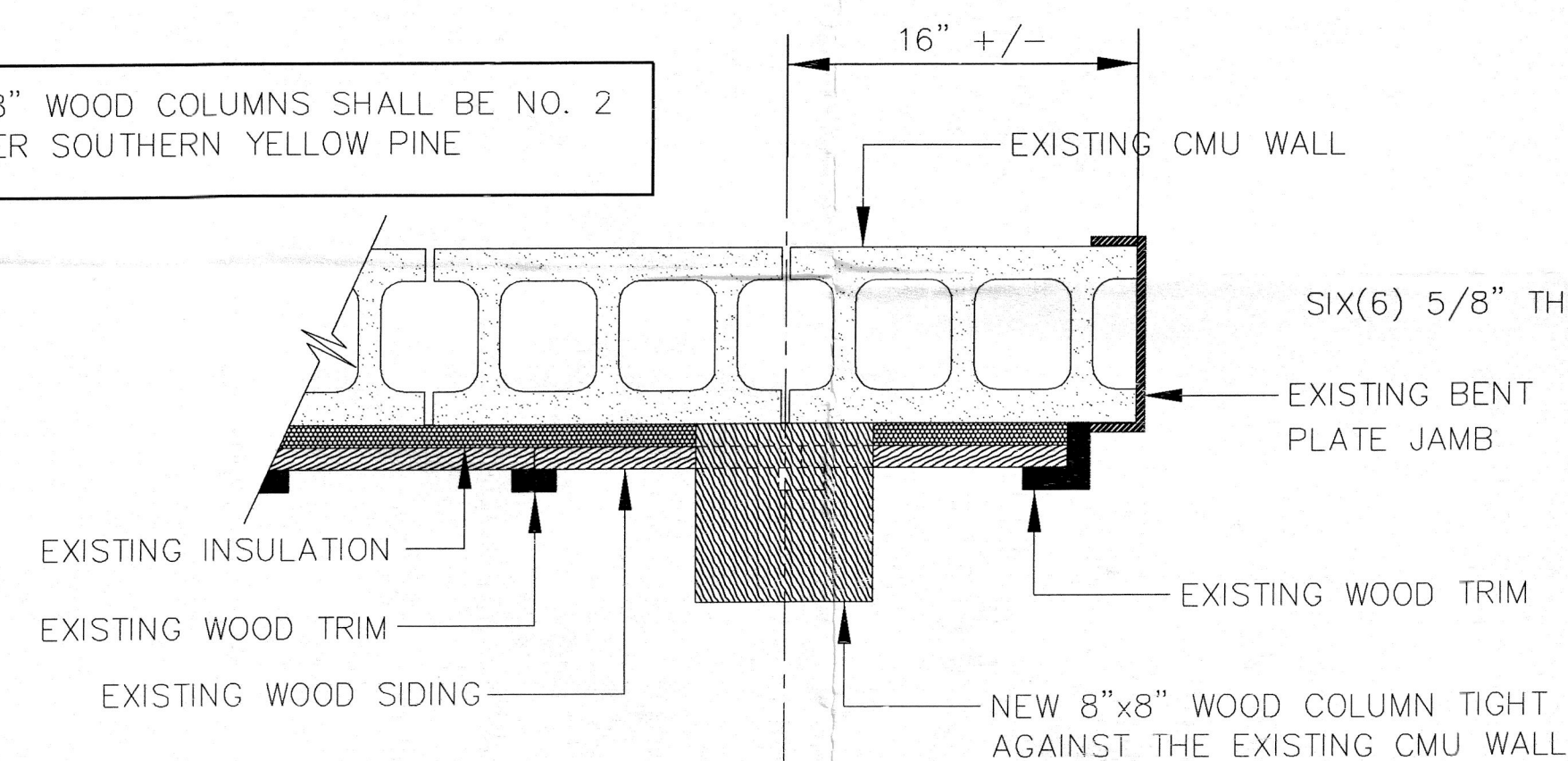
Durwin P. Jones



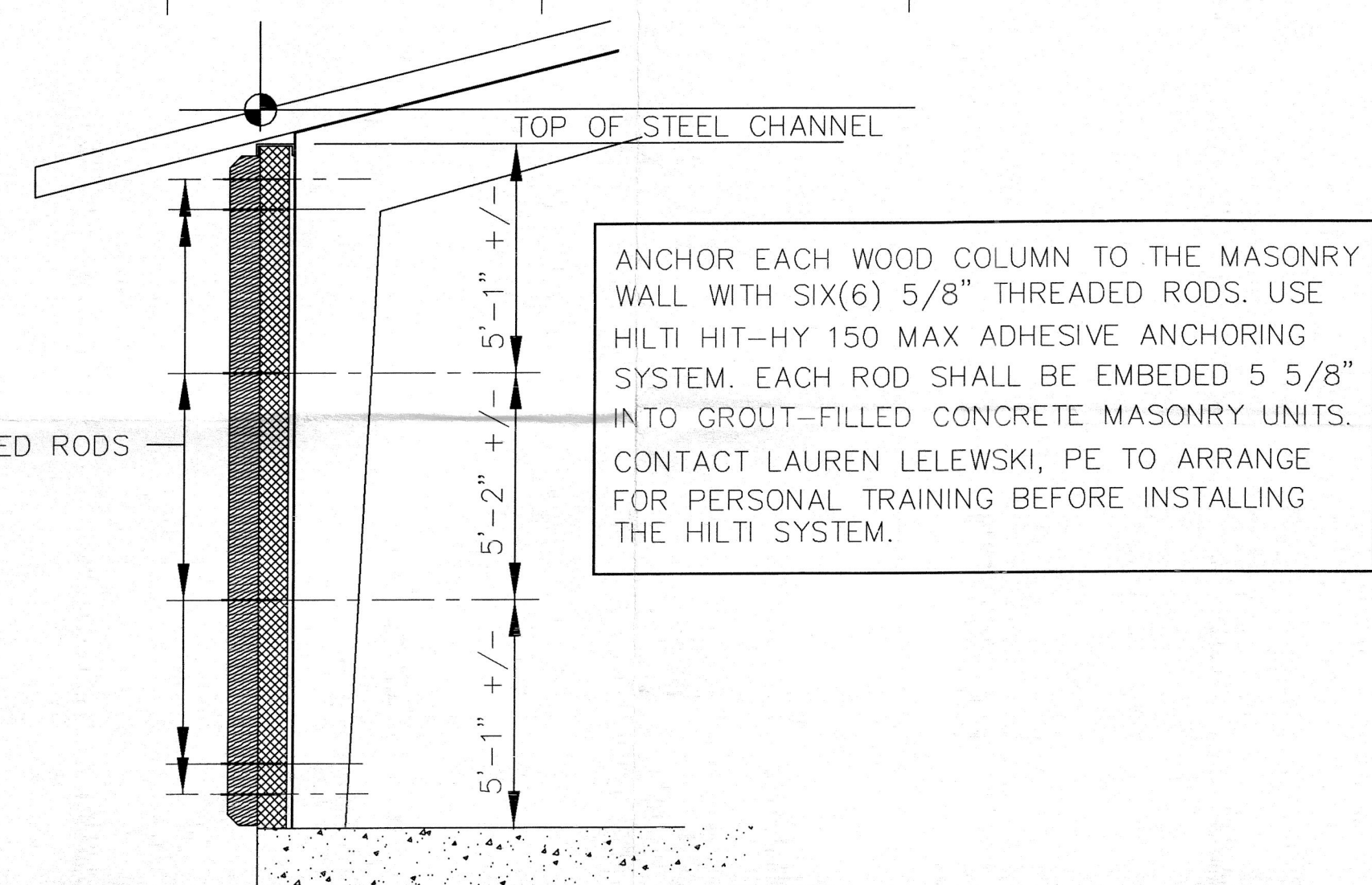
PLAN BUILDING "F"



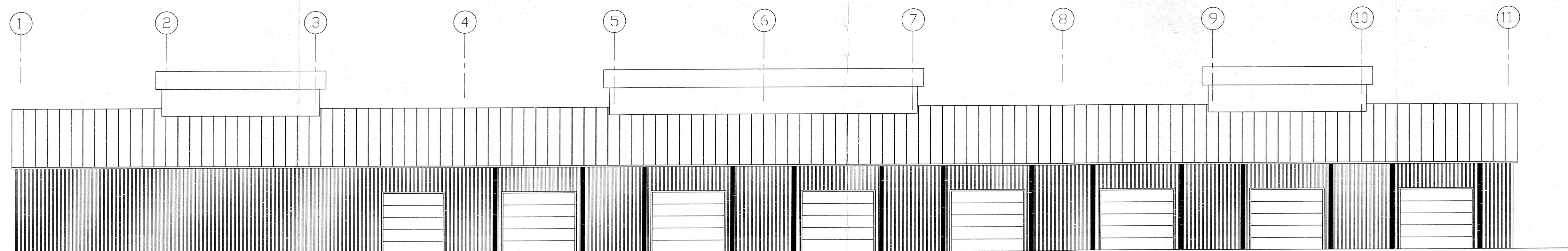
SECTION AT COLUMN



PLAN AT JAMB



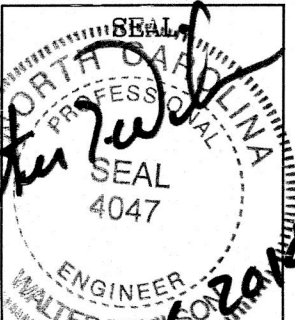
CONNECTIONS



ELEVATION BUILDING "F"

REVISIONS

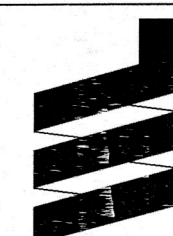
DATE



WILSON & LYSIK INC.
FOR EAST WENDOVER AVENUE
GREENSBORO, NC 27405
ZIP CODE 27405

PHONE (336) 275-3338
FAX (336) 275-3838

<http://www.wl-eng.com>



**WALL REINFORCING
FARMER'S MARKET**
GREENSBORO
NORTH CAROLINA

JOB NO.

G-1050

DATE

SEPT 6, 2014

DRAWN BY

WJW

CHECKED BY

SHEET NO.

S-1

AGREEMENT

This agreement (the "Agreement") is made and entered into effective as of this 30th day of August 2016 by and between the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section (hereinafter referred to as either the "Department" or the "Animal Welfare Section"), and the Forsyth County, North Carolina Animal Services Shelter, located at 5570 Sturmer Park Circle, Winston-Salem, North Carolina 27105, an agency of Forsyth County, North Carolina (hereinafter referred to as the "Forsyth Animal Shelter" or the "Shelter").

RECITALS

WHEREAS, on April 18, 2016, the Department assessed the Forsyth Animal Shelter a civil penalty in the amount of Five Thousand Two Hundred Dollars (\$5,200.00) as a result of the Department's discovery of evidence indicating that the Shelter had violated N.C. Gen. Stat. §19A-32.1(a), (b) (2) and (g), 02 N.C.A.C. 52J .0101(1-5), 02 N.C.A.C. 52J .0103 and 02 N.C.A.C. 52J .0210(c); and

WHEREAS, on April 18, 2016, the Department issued the Forsyth Animal Shelter a written Civil Penalty Assessment which, among other things, described in detail the evidence referred to in the preceding paragraph of this Agreement; and

WHEREAS, a true and correct copy of the April 18, 2016 written Civil Penalty Assessment is attached hereto as Exhibit 1 and is incorporated by reference in this Agreement; and

WHEREAS, the Forsyth Animal Shelter disputes certain aspects of the April 18, 2016 written Civil Penalty Assessment; and

WHEREAS, the Forsyth Animal Shelter has the right to contest the April 18, 2016 written Civil Penalty Assessment by filing a petition for a contested case hearing in the North Carolina Office of Administrative Hearings; and

WHEREAS, the parties recognize that litigating the April 18, 2016 written Civil Penalty Assessment would be expensive and time-consuming; and

WHEREAS, the Forsyth Animal Shelter and the Department desire to fully and finally compromise and settle this and all other disputes and controversies between them involving the Department's April 18, 2016 assessment of a civil penalty against the Forsyth Animal Shelter; and

WHEREAS, the Forsyth Animal Shelter and the Department desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of litigation.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, the Department and the Forsyth Animal Shelter agree as follows:

- 1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by reference as if fully set forth herein.**
- 2. On May 23, 2016, the Shelter produced documentation showing that Animal A329347 was in the care of a veterinary clinic during the majority of the time that other Shelter records initially indicated the animal was in the care of the Shelter. The basis for the violation cited in the April 18, 2016 civil penalty for this animal was that Shelter records produced at the time of the investigation indicated that this animal was known to be injured at the time of intake, no documentation of administration of veterinary care could be found and there was no recollection or indication from the Shelter staff that the animal had been taken to a veterinary clinic. Since the documentation produced by the Shelter on May 23, 2016 indicates that this animal did receive veterinary care, the Department is waiving this violation and associated \$1,000.00 portion of the civil penalty.**
- 3. The Shelter voluntarily agreed to participate in a Program Review. The Shelter has implemented or is in the process of implementing the suggestions and recommendations generated by the Program Review.**
- 4. The Shelter dedicated a significant amount of resources to improve the record keeping system and animal documentation at the shelter. In addition, the Shelter has implemented an internal audit program to assess continued compliance with record keeping requirements.**
- 5. On August 17, 2016, the Department conducted a follow-up site visit. At this time, Shelter staff was able to produce complete animal records for 13 randomly selected animals. The documentation for these animals met the requirements of the N.C. Animal Welfare Act and the regulations promulgated thereunder. In addition, the staff was able to generate all reports requested by Department staff personnel.**
- 6. In consideration of the efforts of the Shelter to correct all violations, to update and improve procedures at the Shelter relative to compliance with the NC Animal Welfare Act and to**

implement safeguards to prevent future violations, the Department will lower the civil penalty that was assessed on April 19, 2016 to Two Thousand One Hundred Dollars (\$2,100.00).

7. By no later than September 30, 2016 the Forsyth Animal Shelter shall pay the Department the sum of Two Thousand Dollars One Hundred Dollars (\$2,100.00).

8. Upon its timely receipt from Forsyth Animal Shelter of the sum of \$2,100.00, as provided in paragraph 7 of this Agreement above, and upon the Forsyth Animal Shelter's full compliance with the other terms of this Agreement, the Department shall waive the remaining civil penalty assessment of Two Thousand One Hundred Dollars (\$2,100.00).

9. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

10. The parties agree to act in good faith in the implementation of this Agreement.

11. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referred to in this Agreement.

12. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

13. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.


14. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor of or against any party based upon which party drafted or participated in drafting this Agreement.

15. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

16. This Agreement shall be binding in perpetuity upon and shall inure to the benefit of the parties, their agents, officers, employees, successors, assigns, heirs, executors and administrators.


IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and signed as of the day and year indicated by their signatures below:

THE NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
VETERINARY DIVISION, ANIMAL WELFARE
SECTION

By: 
Patricia Norris, DVM
Director, Animal Welfare Section, North Carolina
Department of Agriculture and Consumer Services

Date: September 20, 2016

THE FORSYTH COUNTY, NORTH CAROLINA
ANIMAL SERVICES SHELTER

By: 
J. Dudley Watts, Jr
County Manager, Forsyth County, North Carolina

Date: September 13, 2016
PLN Per direction of
Dudley Watts

Exhibit 1

**(April 18, 2016 Written Notice of Civil Penalty
Assessment)**



Steven W. Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Veterinary Division

R. Douglas Meekes, DVM
State Veterinarian

April 18, 2016

J. Dudley Watts, Jr.
Forsyth County Manager
201 North Chestnut Street
Winston-Salem, NC 27101

NOTICE OF CIVIL PENALTY

Re: CIVIL PENALTY ASSESSMENT FOR VIOLATIONS OF N. C. GENERAL STATUTE §19A-32.1(a), (b)(2) and (g) and TITLE 02 N. C. ADMINISTRATIVE CODE, CHAPTER 52J, SECTIONS .0101(1) - (5); .0103 and .0210(c).

AWS-CP-2016-4

Facility: Forsyth County Department of Animal Control Animal Shelter

Dear Mr. Watts:

Pursuant to N. C. General Statute § 19A-40 I am issuing this notice to you that the Forsyth County Department of Animal Control Animal Shelter is assessed a civil penalty of \$5,200.00 as provided in the enclosed Notice of Violations.

With regard to the civil penalty, within 60 days from the date of receipt, you must do one of the following:

1. Pay the civil penalty assessment; or
2. File a written petition for a contested case hearing with the N. C. Office of Administrative Hearings to appeal the penalty assessment.

Pursuant to N. C. General Statute § 150B-22, either party to a dispute may initiate informal settlement negotiations at any time. To negotiate a settlement of this assessment, you may contact me by telephone at (919) 707-3280. Settlement offers do not extend the 60-day deadline for payment or filing of a contested case petition.

Additional information about your options is provided below:

PAYMENT

To pay the penalty, please send your payment by check or money order made payable to the North Carolina Department of Agriculture and Consumer Services to:

North Carolina Department of Agriculture and Consumer Services
Dr. Patricia Norris
Director, Animal Welfare Section
1030 Mail Service Center
Raleigh, NC 27699-1030

APPEAL

If you file a contested case petition, it must be in writing and in the form prescribed by N.C. General Statute § 150B-23. The petition must be accompanied by a filing fee of twenty dollars (\$20.00) payable to the N.C. Office of Administrative Hearings ("OAH"). Should you have any questions about what the fee would be for your case, please contact the OAH Clerk's Office at 919-431-3000. Payment can be made by cash, money order, certified check or check drawn on an attorney's trust account. Make checks payable to: Office of Administrative Hearings. File the petition and one copy with:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714

Any questions about filing a petition may be directed to the Clerk of OAH by telephone at 919-431-3000. You must serve NCDA&CS by mailing a copy of the petition to:

Ms. Tina Hlabse
North Carolina Department of Agriculture and Consumer Services
Registered Agent and General Counsel
1001 Mail Service Center
Raleigh, NC 27699-1001

Payment of the penalty will not foreclose further enforcement action against you for any new violation. If the violations which resulted in the assessment are of a continuing nature, NCDA&CS reserves the right to assess additional civil penalties in the future or take other enforcement action against you.

Your attention to this matter is appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "Patricia Norris", followed by the printed text "DVM, MS".

Patricia Norris, DVM MS
Director, Animal Welfare Section

Attachment: Notice of Violations, Assessment of Civil Penalty

cc: R. Douglas Meckes, DVM, State Veterinarian
Tina Hlabec, General Counsel, NCDA&CS
Joe Reardon, Assistant Commissioner, NCDA&CS
Christopher R. McLennan, Assistant Attorney General

STATE OF NORTH CAROLINA
COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, VETERINARY DIVISION
ANIMAL WELFARE SECTION

IN THE MATTER OF

FORSYTH COUNTY DEPARTMENT OF
ANIMAL CONTROL ANIMAL SHELTER

) NOTICE OF VIOLATIONS
) ASSESSMENT OF CIVIL PENALTY
) FOR VIOLATIONS OF N. C. GENERAL
) STATUTE § 19A-32.1(a) and (b)(2) and (g)
) 02 NCAC 52J .0101(1) - (5); .0103 and
) .0210(c).
)

Acting pursuant to N.C. Gen. Stat. § 19A-40, Dr. Patricia Norris, Director, Animal Welfare Section ("AWS"), North Carolina Department of Agriculture and Consumer Services ("NCDA&CS") makes the following:

FINDINGS OF FACT

1. At all times pertinent to this matter, Forsyth Department of Animal Control Animal Shelter ("the shelter") was an animal shelter, registered pursuant to N.C. General Statute § 19A-26.
2. On March 17, 2016, AWS Animal Health Technician Lindsey Lloyd ("Inspector Lloyd") conducted a random facility inspection of the shelter. This inspection was marked as "Disapproved" due to multiple incomplete shelter records for the animals, inability of staff to match records to animals at the time of the facility inspection and euthanasia of 4 animals prior to the expiration of the minimum hold period of 72 hours without documentation of a serious illness or serious injury as required by N. C. General Statute § 19A-32.1(b)(2) or proper owner surrender with written consent under § 19A-32.1(g).
3. On the March 17, 2016 inspection, Inspector Lloyd gave the shelter 7 days in which to correct the record keeping/filing problem, i.e. ensure that complete records for an animal could be located and matched to that animal.
4. On March 28, 2016 Inspector Lloyd returned to the shelter with AWS Animal Health Technician Christie Shore ("Inspector Shore"). Inspectors Lloyd and Shore returned to the shelter on March 29, 2016 and on April 6, 2016. AWS Outreach Coordinator Joe Blomquist ("Coordinator Blomquist") was also at the shelter on March 29, 2016. Inspector Lloyd returned to the shelter again on April 7, 2016. While at the shelter on these dates, the Inspectors and Coordinator reviewed shelter records and interviewed shelter staff.
5. On March 29, 2016, Inspectors Lloyd and Shore met with a citizen who provided them with information and filed a complaint alleging modification of animal records by shelter staff, failure to provide veterinary care to a dog for several days, and failure to provide veterinary care for another dog and a kitten in which the outcome was that the animals were later found dead in their kennels. The citizen also provided information and filed complaints for matters that were not found to be under the jurisdiction of AWS.
6. On April 6, 2016 Inspectors Lloyd and Shore obtained veterinary medical records for some of the shelter animals from the attending veterinary clinics. On April 7, 2016 Inspector Lloyd obtained veterinary medical records from an additional attending veterinary clinic.

7. The facility inspection and records review detailed above and review of the information provided by the complainant revealed the following:

- a) Three cats with the identification numbers A329121, A329122 and A329123 were taken in by the shelter as strays on February 18, 2016. All 3 cats were euthanized on February 19, 2016. No documentation of serious illness or injury at the time of euthanasia could be found. When asked, shelter staff disclosed the reason for the early euthanasia was because the animals were "feral."
- ✓ b) A cat with the identification number A329340 was taken in by the shelter as a stray on February 27, 2016. The kennel card notes a wound on the front leg. The cat was euthanized on February 29, 2016. No evidence of veterinary care could be found. No documentation of justification for early euthanasia was provided.
- ✓ c) A cat with the identification number A329346 was taken in by the shelter as a stray on February 27, 2016. The kennel card indicates that this cat had an injured left front leg. The intake registry indicates "stray injured cat - basic care." The medical history record for this cat indicates instructions for veterinary care issued on February 29, 2016. The cat was euthanized on February 29, 2016. No documentation of serious illness or injury at the time of euthanasia could be found.
- ✓ d) A cat with the identification number A329535 was taken in by the shelter as an owner surrender on March 5, 2016 as noted in the kennel card and in the computer. The cat was euthanized on March 7, 2016. No written consent by the owner or other justification for the disposition of the animal before the expiration of the minimum holding period could be found.
- ✓ e) A dog named Curmen with the identification number A321751 was taken in by the shelter as a stray on October 30, 2015. A note was made in the computer on October 30, 2015 at 15:52 that "dog has a prolapsed uterus. fw." Another note was made into the computer on November 1, 2015 at 17:16 which stated: "Was told by a volunteer that this dog has a prolapsed (sic) uterus. I sent a picture to Dr. Strickland asking him if the dog needed any medication the only thing he prescribed was tramadol if the dog was in pain. (sic) gave her 1.5 tramadol, the dog is due out today 11/1/15 at 15:48 . nh." No documentation of any veterinary care being administered to this dog on October 30 or October 31, 2016 could be found. Veterinary care was not sought until late afternoon on November 1, 2016. There is no evidence that this veterinary care was sought due to daily observation by staff of the medical condition which had been present since intake.
- f) A kitten with the identification number A320629 was taken in by the shelter as a stray on October 16, 2015. The intake registry notes this kitten to be 1 month old and "sick." The medical history for this kitten notes on October 16, 2015: "Eyes possibly blind." The complainant notes that on October 18, 2015, she observed that the kitten was unable to eat the wet food in the kennel and was doing poorly. The complainant states she brought her concerns to the attention of the staff present at the shelter that day. An entry into the computer on October 19, 2015 at 10:52 notes "Cat is a foster, medical emergency. Cat can not (sic) eat on its own, 3-5 weeks old, sickly." The computer record notes on October 19, 2015 at 11:32 that the kitten died in the kennel. No evidence of any veterinary care being administered to this kitten could be found.
- g) A dog named Bear with identification number A121091 was owner surrendered to the shelter on February 19, 2016. The Intake Registry notes this dog is "elderly and has medical issues." The Activity Card for this dog notes "the dog is fourteen years old and cannot hardly walk - due to hip and leg issues." A memo entered in the computer on February 22, 2016 at 7:57 by Scott Bird notes: "Dog

displaying strange behavior. Unbalanced, can barely move, head tilted strange. Old. OK to euth this dog." A memo entered in the computer on February 22, 2016 at 16:12 noted: "Dog bit Monica Sparks at approx. 15:09 PM today. As per T. Jennings dogs (sic) head to be sent to Raleigh (sic) for testing." Shelter records indicate that the bite occurred during handling the dog in preparation for euthanasia. The decision was made not to continue with the euthanasia and send the remains for rubies testing but to place the dog in a 10 day quarantine. The complainant states that she observed this dog on February 28, 2016 not doing well, (urine in his water bowl, vomit/diarrhea in his kennel, severely lethargic or unable to move). She stated that she discussed her concerns with a staff member on that day. A memo entered into the computer on March 2, 2016 at 11:42 notes: "This dog died in the kennel. Happened sometime in the very early morning hours of 03.01.16. Staff found dog around 8:00AM dead in kennel." No evidence could be found of veterinary care being provided to this dog despite being barely able to walk at the time of intake and displaying significant neurological signs during the stay at the shelter.

h) A dog with the identification number A329347 was taken in by the shelter as a stray on February 28, 2016. A memo entered into the computer on February 29, 2016 at 16:18 notes: "This dog is a medical emergency. Dog hit by a car. Can not (sic) move, heavy breathing. Possible broken or fractured right hindlimb. Dog can not (sic) move. OK to euth this dog as a medical (sic) emergency (sic). Dog is aggressive, staff could not scan animal. OK to euth dog." This animal was not euthanized until late afternoon (16:40) on February 29, 2016. No evidence of veterinary care being provided to this dog during the interim period could be found.

i) A dog with the identification number A329124 was taken in by the shelter as a stray on February 19, 2016. The dog was noted as "sick-emaciated dog" on the Intake Registry. This dog was euthanized on February 19, 2016. No determination, in writing, by the shelter manager, that the animal was seriously ill or injured to justify the euthanasia before the expiration of the minimum holding period could be found.

j) A dog with the identification number of A330368 was taken in by the shelter as a stray on March 17, 2016 according to staff interviews, medical records from the attending veterinary clinic and the activity card of the ACO who transported the dog. This dog was admitted directly to the attending veterinary clinic and assessed as being severely injured with spinal injuries and pelvic fractures. The veterinarian recommended euthanasia due to the severity of the injuries. The dog was transported to the shelter on March 18, 2016 and euthanized. No shelter record either computer generated or hand written could be located for this dog. No intake information or euthanasia information, except the DEA log entry, could be found for this dog. None of the information required by the 02 NCAC 52J Section .0101 could be located for this dog.

k) A litter of puppies with the identification numbers A328372, A328377, A328379, A328381, A328382, A328383, and A328384 have intake dates of February 10, 2016 on their kennel cards. According to shelter staff statements, these nursing puppies actually entered the shelter with their dam on February 2, 2016, not on February 10, 2016 as indicated in the shelter records. The shelter staff indicated that their procedure for litters of nursing animals was not to record the actual day of intake but to record the date on which their disposition had been decided. The dam had been confiscated due to a bite and was placed in a 10 day quarantine. The dam was euthanized on February 11, 2016 at the end of her quarantine period. The puppies were also euthanized on February 11, 2016. The puppies are noted on the kennel card as owner surrendered animals, yet no owner surrender form with a signature could be located. No Intake Registry sheet could be located for 6 of the 7 puppies. When asked by Inspector Shore for the Intake Registry sheets, the shelter staff produced one for puppy A328372 dated March 29, 2016, which is more than 6 weeks after the puppy had been euthanized.

1) A review of shelter records for March 2016 revealed 53 animal records that were missing information, animal description, location of the animal, disposition information, euthanasia information and/or record of veterinary care as required in 02 NCAC 52J .0101(1) - (5). The review of shelter records for February 2016 revealed 27 animal records with similar missing information.

m) Review of shelter records reveal that numerous animal records are missing required information such that compliance with N. C. General Statute §19A-32.1 could not be ascertained.

CONCLUSIONS

As a result of this investigation, the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section, finds that the shelter either by act or omission, violated the provisions of N. C. General Statutes §19A-32.1(a), (b)(2) and (g) and 02 North Carolina Administrative Code 52J .0101(1) - (5); .0103 and .0210(c).

Violation of N. C. General Statutes §19A-32.1(u) and (b)(2) occurred with animals A329121, A329122, A329123, A329340 and A329346.

Violation of N. C. General Statute §19A-32.1(g) occurred with animal A329535.

Violation of 02 North Carolina Administrative Code 52J .0101(1) - (5) occurred with A330368 and numerous animals as detailed above.

Violation of 02 North Carolina Administrative Code 52J .0103 occurred with numerous animals as detailed above.

✓ Violation of 02 North Carolina Administrative Code 52J .0210(c) occurred with animals A321751, A320629, A121091, and A329347. (e, f, g, h)

(See Appendix for text of cited General Statutes and Administrative Code)

CIVIL PENALTIES

As required by N.C. Gen. Stat. § 19A-40, in determining the amount of the civil penalty, I have considered the degree and extent of harm caused by the violations listed above.

Accordingly Forsyth County Department of Animal Control Animal Shelter is assessed a civil penalty for the following violations:

- 1) \$500.00 for 5 violations of N. C. General Statute §19A-32.1(u) and (b)(2);
- 2) \$100.00 for violation of N. C. General Statute §19A-32.1(g);
- 3) \$500.00 for violation of 02 North Carolina Administrative Code 52J .0101(1) - (5);
- 4) \$100.00 for violation of 02 North Carolina Administrative Code 52J .0103; and
- 5) \$4,000.00 for 4 violations of 02 North Carolina Administrative Code 52J .0210(c)

\$5,200.00 TOTAL AMOUNT ASSESSED

April 14, 2016
Date

Patricia Norris, DVM, MS
Patricia Norris, DVM, MS
Director, Animal Welfare Section
North Carolina Department of
Agriculture & Consumer Services

Appendix

RELEVANT LAWS AND REGULATIONS

§ 19A-32.1. Minimum holding period for animals in animal shelters; public viewing of animals in animal shelters; disposition of animals.

(a) Except as otherwise provided in this section, all animals received by an animal shelter or by an agent of an animal shelter shall be held for a minimum holding period of 72 hours, or for any longer minimum period established by a board of county commissioners, prior to being euthanized or otherwise disposed of.

(b) Before an animal may be euthanized or otherwise disposed of, it shall be made available for adoption under procedures that enable members of the public to inspect the animal, except in the following cases:

(1) The animal has been found by the operator of the shelter to be unadoptable due to injury or defects of health or temperament.

(2) The animal is seriously ill or injured, in which case the animal may be euthanized before the expiration of the minimum holding period if the manager of the animal shelter determines, in writing, that it is appropriate to do so. The writing shall include the reason for the determination.

(g) An animal that is surrendered to an animal shelter by the animal's owner may be disposed of before the expiration of the minimum holding period in a manner authorized under subsection (f) of this section if the owner provides to the shelter (i) some proof of ownership of the animal and (ii) a signed written consent to the disposition of the animal before the expiration of the minimum holding period.

§ 19A-40. Civil Penalties.

The Director may assess a civil penalty of not more than five thousand dollars (\$5,000) against any person who violates a provision of this Article or any rule promulgated thereunder. In determining the amount of the penalty, the Director shall consider the degree and extent of harm caused by the violation. The clear proceeds of civil penalties assessed pursuant to this section shall be remitted to the Civil Penalty and Forfeiture Fund in accordance with G.S. 115C-457.2. (1995, c. 516, s. 6; 1998-215, s. 3.)

02 NCAC 52J .0101 RECORDS; ANIMAL SHELTERS, ETC.

Operators of all animal shelters, pet shops, public auctions, and dealers shall maintain records on all dogs and cats showing the following:

- (1) origin of animals (including names and addresses of consignors) and date animals were received;
- (2) description of animals including species, age, sex, breed, and color markings;
- (3) location of animal if not kept at the licensed or registered facility;
- (4) disposition of animals including name and address of person to whom animal is sold, traded or adopted and the date of such transaction; in the event of death, the record shall show the date, signs of illness, or cause of death if identified; if euthanized, the record shall show date and type of euthanasia; and
- (5) record of veterinary care including treatments, immunization and date, time, description of medication (including name and dosage), and initials of person administering any product or procedure.

History Note: Authority G.S. 19A-34;
Eff. April 1, 1984;
Amended Eff. January 1, 2005; April 1, 1985.

02 NCAC 52J .0103 INSPECTION OF RECORDS

All operators of animal shelters, pet shops, boarding kennels, public auctions, and persons operating as dealers shall make all required records available to the director or his authorized representative on request, during the business and cleaning hours listed on the license application. The operator must be able to match each animal to its record upon request. Records shall be maintained for a period of one year after the animal is released.

History Note: Authority G.S. 19A-24; 19A-25;
Eff. April 1, 1984;
Amended Eff. January 1, 2005; April 1, 1985.

02 NCAC 52J .0210 VETERINARY CARE

(c) Each dog and cat shall be observed daily by the animal caretaker in charge, or by someone under his direct supervision. Sick or diseased, injured, lame, or blind dogs or cats shall be provided with veterinary care or be euthanized, provided that this shall not affect compliance with any state or local law requiring the holding, for a specified period, of animals suspected of being diseased. If euthanasia is performed at a certified facility, a list of personnel approved to perform euthanasia shall be maintained in a Policy and Procedure Manual as described in 02 NCAC 52J .0800. Diseased or deformed animals shall be sold or adopted only under the policy set forth in the "Program of Veterinary Care." Full written disclosure of the medical condition of the animal shall be provided to the new owner.

History Note: Authority G.S. 19A-24;
Eff. April 1, 1984;
Amended Eff. March 23, 2009; January 1, 2005.

**RESOLUTION RATIFYING AND AUTHORIZING EXECUTION OF AN
AGREEMENT WITH THE NORTH CAROLINA DEPARTMENT OF AGRICULTURE
AND CONSUMER SERVICES, VETERINARY DIVISION, ANIMAL WELFARE
SECTION IN SETTLEMENT OF A CIVIL PENALTY ASSESSMENT AGAINST THE
FORSYTH COUNTY ANIMAL CONTROL/ANIMAL SHELTER**

WHEREAS, on April 18, 2016, the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section assessed a civil penalty in the amount of \$5,200.00 against the Forsyth County Animal Control/Animal Shelter as a result of alleged violations of the N.C. Animal Welfare Act; and

WHEREAS, the Forsyth County Animal Control/Animal Shelter disputes certain aspects of the April 18, 2016 Civil Penalty Assessment; and

WHEREAS, the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section, has agreed to reduce the amount of the original civil penalty assessed against the Forsyth County Animal Control/Animal Shelter from \$5,200.00 to \$2,100.00, in compromise and settlement of disputes of certain aspects of the Civil Penalty Assessment and in consideration of the Shelter's efforts to correct any violations, update and improve procedures at the Shelter in compliance with the N.C. Animal Welfare Act, and to implement safeguards to prevent future violations;

NOW, THEREFORE, BE IT RESOLVED that the Forsyth County Board of Commissioners hereby ratifies and authorizes execution of the attached Agreement between the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section and the Forsyth County Animal Control/Animal Shelter by the County Manager, on behalf of Forsyth County and its Shelter, subject to a pre-audit certificate thereon by the County Chief Financial Officer, where appropriate, and approval as to form and legality by the Forsyth County Attorney.

Adopted this the 12th day of September 2016.

ADOPTED

SEP 12 2016

**Forsyth County Board
of Commissioners**

14-02602

RELEASE FOR PROPERTY DAMAGE ONLY

I/WE Ellen Frank

For myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$20.00, I/We do hereby remise, release, and forever

discharge The State of North Carolina, NC Dept of Agriculture & Consumer Services and NC State Fair Division

and its, his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of DAMAGE TO PROPERTY (including loss of use thereof) arising out of an accident which occurred on or about the 22nd day of October, 2014, at or near Raleigh in the State of North Carolina. This release does not consider any verified hidden damages and or supplemental damages.

The above sum stated as a consideration of this Release is to be paid as follows:

\$20.00 To: Ellen Frank

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/~~we~~ have signed this Release at

3rd Ellen Frank

In the State of North Carolina this X 15th day of X December, 2014.

IN THE PRESENCE OF

X Ellen Frank Signature
X Ellen Frank Print Name
X 1429 Opal Ct Address
X Raleigh, NC 27615 City/Zip

X Karen Rosaler Witness
X 4108 Morning Blossom Address
X Raleigh NC 27616 City/Zip

XSS# 

Thank you for your
concern and attention
to this unfortunate
situation/occurrence

AGREED TO:

Agency

By

N.C. Dept of Agriculture
N. Davis

RELEASE FOR PROPERTY DAMAGE ONLY

I Brenda Hackney for myself, my heirs, executors, administrators, successors, and assigns in consideration of the payment of \$796.50. I do hereby remise, release, and forever discharge The State of North Carolina, the N.C. Department of Agriculture and Consumer Services, and the N.C. State Fairgrounds, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of damage to property arising out of an incident which occurred on or about the 30th day of July 2018 near 1025 Blue Ridge Road, Raleigh in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows :

\$ 796.50 To: Brenda Hackney

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/WE have signed this Release at SECU in the State of NC this 26 day of December, 2018.

IN THE PRESENCE OF

X Michael Cartwright Witness Name

X 2700 Macedonia Rd. Witness Address

X Cary, NC, 27518 City/State/Zip

X BRENDA HACKNEY Print Name

X Brenda Hackney Signature

X 402 November St Address

X Garner, NC 27529 City/State/Zip

X [REDACTED] Social Security #

AGREED TO:

Agency: N.C. Department of Justice

By: Shelly W. Long

Desi Bazaar Halal Meats, 2785 Cruse Road NW #10, Georgia 30044, in the State of Georgia.

Whereas, on October 16, 2013, U.S.D.A., F.S.I.S., Office of Investigations, Enforcement and Audits, Senior Investigator Kenneth Cash sealed (Seal Number 213379) ("Inv. Cash") the Respondents' delivery truck that contained the misbranded, non-inspected and/or adulterated beef quarter, goat and lamb carcasses. Inv. Cash then explained to "Abraham," the driver of Respondents' delivery truck, about the U.S.D.A. truck seal policy and instructed him to transport the misbranded, non-inspected and/or adulterated beef quarters, goat and lamb carcasses back to Respondents for disposition/re-inspection of the beef quarters, goat and lamb carcasses.

Whereas, on October 17, 2013, at approximately 1:10 A.M., North Carolina Department of Agriculture and Consumer Services (N.C.D.A. & C.S.), Meat and Poultry Inspection Division (M.P.I.D.), Food Compliance Officer Ray Sloan ("CO Sloan") and N.C.D.A. & C.S. M.P.I.D. Area IV Supervisor John Horne Jr. ("Sup. Horne") met the Respondents' delivery truck at Respondents' facility, Est. # 31795, at 36117 Rocky River Springs Road, Norwood, North Carolina 28128, and found that said truck contained the misbranded, non-inspected and/or adulterated beef quarters, goat and lamb carcasses and was sealed (Seal Number 213379) by U.S.D.A., F.S.I.S. Inv. Cash.

Whereas, on October 17, 2013, at approximately 9:00 A.M., CO Sloan, N.C.D.A. & C.S., M.P.I.D., Agriculture Program Specialist Rick Phillips ("Spec. Phillips") and Sup. Horne visited Respondents' establishment to perform re-inspection on the misbranded, non-inspected and/or adulterated beef quarters, goat and lamb carcasses and observed that the beef quarters, goat and lamb carcasses (hereinafter, "product"). Said product had been loaded onto the floor of the Respondents' delivery truck and was found to be adulterated and/or contaminated with fecal material, dirt, leaves, etc. They also found that the load of beef quarters, goat and lamb carcasses had been transported without proper temperature controls, resulting in that product being in an "off condition," giving off an odor.

Whereas, on October 17, 2013, Spec. Phillips and Sup. Horne met with and instructed Respondent Zafer Kafozi, (hereinafter "Respondent Kafozi") Owner & President of Respondent Halal Meat Slaughter House, Inc., ("Respondent HMSH") to unload/transport the misbranded, non-inspected and/or adulterated beef quarters, goat and lamb carcasses to a walk in cooler located at Respondents' establishment for Re-inspection. The product consisted of approximately eight (8) beef quarters, one hundred seventeen (117) goat carcasses and nine (9) lamb carcasses (hereinafter, "Product Part A"). Product Part A was moved to the establishment's walk in cooler and re-inspected. Out of all of Product Part A, sixty (69) goat carcasses and eight (8) beef quarters passed inspection and were approved for shipment; the rest of Product Part A failed inspection.

Whereas, on October 18, 2013, at approximately 7:00 A.M., Respondent Kafozi informed CO Sloan, Spec. Phillips and Sup. Horne that the walk in cooler where Product Part A was being stored broke down during the night of October 17, 2013.

Whereas, on October 18, 2013, Respondent Kafozi voluntarily destroyed all of Product Part A that was being stored in the walk in cooler located at Respondents' establishment on the night of October 17, 2013.

Whereas, on October 18, 2013, at approximately 10:30 A.M., Spec. Phillips and Sup. Horne continued performing re-inspection on the remaining beef quarters, goat and lamb carcasses that were still being stored in Respondents' delivery truck (hereinafter "Product Part B").

Whereas, CO Sloan reviewed Respondents' various H.A.C.C.P. records (B.S.E. and Specified Risk Material) and slaughter records for October 10, 2013, thru October 15, 2013. In the course of this review CO Sloan could not match any of Respondents' various H.A.C.C.P. and slaughter records totals to the total amount of beef quarters, goat and lamb carcasses delivered/transported to the various retail stores located in the State of Georgia. CO Sloan concluded from said review that Respondent Kafozi failed to keep accurate and legible HACCP and custom records for said dates, which coincide with the Muslim festival of Eid al-Adha ("Feast of the Sacrifice").

Whereas, Respondent Kafozi stated in a signed statement dated October 17, 2013, that:

- a) he slaughtered, processed, transported, stored, offered for sale and sold misbranded, non-inspected (no mark of inspection or required labeling) and adulterated (contaminated with fecal material, dirt and leaves) beef quarters, goat and lamb carcasses to various retail stores and to the general public in the State of Georgia;
- b) the refrigeration on his delivery truck broke down while said truck was returning to his establishment in North Carolina, after the beef quarters, goat and lamb carcasses were detained by the Georgia Department of Agriculture and sealed by Inv. Cash; and
- c) he does not know how long the refrigeration was off or the temperature of the product while in transport on his truck.

Whereas, on October 17, 2013, Respondent Kafozi was issued an on-site cease and desist letter (Form C&E 20) for the slaughtering, processing, transporting, storing, offering for sale and selling misbranded, non-inspected and/or adulterated beef quarters, goat and lamb carcasses to various retail stores and the general public in the State of Georgia.

Whereas, Respondents were found to be slaughtering, processing, storing, transporting, offering for sale and/or selling of misbranded, non-inspected and/or adulterated meat products without the benefit of Federal (U.S.D.A.) Inspection in violation of North Carolina General Statutes §§ 106-549.17 and 106-549.23 and may be assessed a civil penalty of up to five thousand (\$5,000.00) dollars per violation under General Statute § 106-549.35 (c).

Whereas, the Commissioner of Agriculture, pursuant to North Carolina General Statute §106-549.35 (c), has the authority to assess civil penalties in this matter and said authority has been delegated to Mr. W. Alan Wade, Director, Meat and Poultry Inspection Division ("Dir. Wade") by the Commissioner of Agriculture pursuant to General Statute § 143B-10(a).

Whereas, on February 19, 2014, Dir. Wade assessed a civil penalty against Respondent Kafozi in the amount of ten thousand dollars (\$10,000.00) for violating North Carolina General Statutes § 106-549.17 and 106.549.23.

Whereas, the Complainant properly notified the Respondents of their right to appeal this agency action by submitting a written petition to the North Carolina Office of Administrative Hearings pursuant to Art. 3 of the North Carolina Administrative Procedure Act, but Respondents declined to do so and, by entering into this Settlement Agreement, hereby expressly waive that right.

SETTLEMENT TERMS

WHEREAS the parties desire to resolve these matters without litigation.

NOW THEREFORE, the parties agree as follows:

- 1) As consideration Respondents have signed Appendix A, a Confession of Judgment in favor of the Complainant for the sum of ten thousand dollars (\$10,000.00) or the unpaid portion thereof. The Complainant shall not file said Confession of Judgment with the Superior Court of the county in which the Respondents reside or locate their principal place of business unless the Respondents violate this settlement agreement by:
 - a. Committing another violation of the laws and/or rules enforced by the Meat and Poultry Inspection Division, specifically but not limited to Articles 49B and 49C of the North Carolina Mandatory Meat and Poultry Inspection Laws, or failing to carry out any obligation established in this Settlement Agreement;
or
 - b. Failing to pay the sum of five thousand dollars (\$5,000.00) to the Complainant as provided below.
- 2) Complainant hereby reserves the right to forego filing Appendix A, the Confession of Judgment, against the Petitioners if it finds a good reason to refrain from doing so. However, if Complainant in the sound exercise of its discretion refrains from filing Appendix A, this is not a waiver of its right to do so later;

- 3) Respondents hereby acknowledge that they have waived their right to petition the North Carolina Office of Administrative Hearings for review of the Complainant's civil penalty assessment, described above, and, should they raise such right in the future as a defense or bar to the Complainant's efforts to collect the sums they have agreed to pay, set forth herein, this settlement agreement shall constitute their admission of such waiver. Further, they hereby agree that said admission shall be admissible in any court or hearing having jurisdiction to decide issues of fact or law pertaining to the Complainant's rights to collect its civil penalty assessment or exercise any other right or remedy against them as provided by law; and
- 4) Respondents further agree not to commit any other violations of the North Carolina Meat and Poultry Inspection Laws, articles 49B and 49C.
- 5) The Respondents shall pay the sum of five thousand dollars (\$5,000.00) to the Complainant within ten calendar days of the date Respondents sign and execute this Settlement Agreement. Said payment will be deemed late if it is sent by U.S. Mail or commercial courier and the envelope is postmarked with a date later than the tenth day in which the payment is due. If the Respondents fail to make said payment on time, the entire unpaid amount, ten thousand dollars (\$10,000.00) shall be due and payable immediately. The Complainant may reduce that unpaid amount to a civil judgment by filing Appendix A, Respondents' Confession of Judgment, as described above;

In return, the Complainant hereby agrees as follows:

- 1) Complainant agrees not to file Respondent's Confession of Judgment, Appendix A, unless Respondents violate this Settlement Agreement;

- 2) Complainant hereby agrees that, if Respondents comply with the Settlement Agreement completely and commits no violations of the North Carolina Meat and Poultry Inspection Laws for three years from the date the Settlement Agreement is signed by both parties, the Complainant will return Appendix A, the original Confession of Judgment, to the Complainant for cancellation;

The parties mutually agree to act in good faith in the implementation of this Agreement.

The parties agree to bear their own attorneys fees and costs. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters. It is further understood that the Respondents' duties and obligations under this Settlement Agreement shall survive and continue in force and effect after the sale, transfer, acquisition, bankruptcy and/or administrative dissolution of Respondent Halal Meat Slaughter House, Inc., and that any liability for payments established by this Settlement Agreement or arising from filing, entry and execution of Appendix A is joint and several liability of the two Respondents.

The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

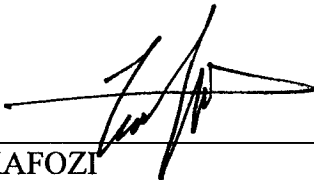
The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates

indicated below:

RESPONDENT ZAFER KAFOZI, IN HIS INDIVIDUAL CAPACITY



ZAFER KAFOZI

Date: 5/23/14


RESPONDENT HALAL MEAT SLAUGHTER HOUSE, INC.



ZAFER KAFOZI, PRESIDENT & SOLE-SHAREHOLDER

Date: 5/23/14

ATTORNEY FOR COMPLAINANT



Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: 5/28/14

FOR COMPLAINANT:

W. Alan Wade

W. ALAN WADE
Director, Meat and Poultry Inspection Division
North Carolina Department of Agriculture & Consumers Services

Date: 5/28/14

Case No.: _____

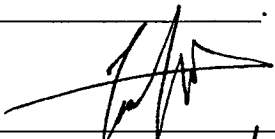
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During an inspection conducted on _____, 201____, Plaintiff's officers discovered that Defendants had failed to meet their obligations under said Settlement Agreement by committing the violations set forth in the report issued by the Plaintiff, which is attached hereto and incorporated by reference.

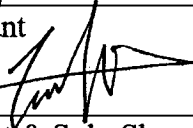
Or

On _____, 2014, Defendants failed to make a scheduled payment of their civil penalty in the amount of five thousand dollars (\$5,000.00) and have, since that date, refused to pay said sum as provided and agreed to in their Settlement Agreement. The unpaid balance at that time was _____.

Pursuant to this Confession of Judgment, the Respondents have hereby agreed that the Plaintiff is entitled to judgment in the amount of _____.

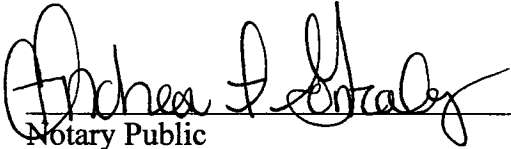


Zafer Kafozi, Defendant SEAL

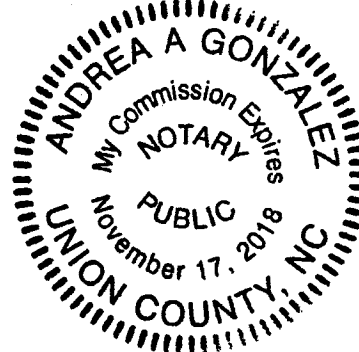


Zafer Kafozi, President & Sole-Shareholder of
Halal Meat Slaughter House, Inc., Defendant SEAL

Sworn to and subscribed before
me this 23 day of may, 2014.



Notary Public



Upon the foregoing confession of judgment, IT IS THEREFORE ORDERED that judgment is entered for Plaintiff against Defendant in the sum of ten thousand dollars (\$10,000.00), with interest to run from _____, 201____, together with the costs in the sum of \$ _____. Said judgment amount is reduced and Defendant is given credit for payment of the sum of \$ _____, which Plaintiff hereby acknowledges receipt of prior to filing of this Confession of Judgment.

This the _____ day of _____, 201_____.

Clerk of Court

COUNTY OF GRANVILLE

SETTLEMENT AGREEMENT

Harold R. Newby (the “Mr. Newby”) and the North Carolina Department of Agriculture and Consumer Services (the “Department”) desire to fully and finally settle this and all other disputes and controversies surrounding Mr. Newby’s operation of an unlicensed slaughter facility and desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

Whereas, the Department received information alleging that the slaughter, processing, and selling of non-inspected pork meat products was being conducted at by Mr. Harold Newby 3692 Herbert Faucette Road, Bullock, North Carolina. On March 13, 2014, at approximately 8:30 a.m., North Carolina Department of Agriculture & Consumer Services (NCDA & CS), Meat & Poultry Inspection Division (MPID), Food Compliance Officers Daniel Moody, Jr. (here in after FCO Moody), Marvin Lackman (here in after FCO Lackman), and Willis Craig Philyaw (here in after FCO Philyaw) accompanied by Crime Scene Investigator Steven E. Hayes of the Granville County Sheriff's Department arrived at the property of Mr. Harold Newby, 3692 Herbert Faucette Road, Bullock, North Carolina, 27507 and executed a search warrant on behalf of the Department.

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and photographed the location and conditions being used by Mr. Harold R. Newby to slaughter, process, and sell misbranded and/or adulterated pork meat products to the general public.

Whereas, FCO's Moody, Lackman, and Philyaw spotted one hog, weighing approximately two hundred fifty (250) pounds, hanging from a boom attached to the back of a John Deere tractor. This non-inspected animal was in the process of being skinned by two males. The tractor was backed to the door of a tin building approximately 30 ft. by 40 ft. with a concrete floor. A large cardboard box collapsed together was under the swine being skinned to help catch the blood dripping from the animal. The door to the tin building remained open, during the skinning process of the animal, allowing dirt, dust, insects from the outside environment to land/fall on the non-inspected hog (swine) being slaughtered.

Whereas, inside the 30 ft X 40 ft tin building FCO's Moody, Lackman, and Philyaw observed a room being used as a processing room for Mr. Harold Newby to process (debone, cutup, grind, etc.) the swine he slaughters, without the benefit of N.C.D.A. (State) or U.S.D.A. (Federal) inspection, to offer for sale and sell to the general public.

Whereas, inside the processing room FCO's Moody, Lackman, and Philyaw saw one (1) non-inspected swine that had already been deboned and cutup earlier that morning, without the benefit of N.C.D.A. (State) or U.S.D.A. (Federal) inspection, and several pieces of unsanitary equipment and unsanitary conditions throughout the non-inspected processing room.

Whereas, inside the processing room of the 30 ft X 40 ft tin building the following unsanitary condition were observed:

- a. The meat band saw that was contaminated with fat, blood build-up, peeling paint and rust from previous day(s) usage.
- b. The grinder had a piece of cardboard box lying in the top tray and it was contaminated with grease from previous day(s) usage.

- c. The grinder tray and head were rusty and contaminated with meat scraps and fat build-up from previous day(s) usage.
- d. No sinks or evidence that any hot water was available.
- e. The only water observed in the processing room appeared to have some type of detergent or dish washing liquid in it.
- f. Upright refrigerators/freezers had dried blood and rust build-up from previous day(s) usage.
- g. Cutting tables that had numerous deep cuts from knives and appeared to be contaminated with fat and meat build-up from previous day(s) usage and the ceramic was worn off.
- h. Numerous types of chemicals and oil based products, (bleach, WD-40, Comet, Brake Fluid, Dawn dishwashing detergent, tube grease, motor oil, etc), were being stored in the direct area where pork products were being processed.
- i. Wooden handle hammers with rusty heads and a large knife with a rusty blade and duck tape on the handle were being stored next to one of the cutting boards.
- j. Hand meat saws with wooden handles and rusty blades were hanging on the front wall of the building next to grease guns and other hand tools.
- k. Knives were being stored between the tin and wood 2x4 supports.
- l. Blue plastic round containers were setting on the floor containing non-inspected pork trimmings.
- m. A plastic work apron with blood and fat residue was hanging from a nail on the front wall.
- n. The concrete floor had fat, dried blood and dirt build-up from previous day(s) usage.
- o. The ceiling was open and had a large amount of spider webs and other various

personal and farm tools being stored over top of the non-inspected pork products being processed.

Whereas, FCO's Moody, Lackman, and Philyaw observed two up-right refrigerators / freezers in the next room of the 30 ft X 40 ft tin building that were rusty and had dried blood from previous day(s) usage. They identified eleven (11) tubes of sausage stuffed in a brown cloth sacks in one of the two refrigerators.

Whereas, FCO's Moody, Lackman, and Philyaw observed a white wood storage building approximately 12 ft X 12 ft was being used as a salt curing and contained a wooden box with approximately two hundred and fifty (250) pounds of salted pork heads and pork tails that were contaminated with hair.

Whereas, FCO's Moody, Lackman, and Philyaw interviewed Mr. Harold R. Newby in reference to his alleged slaughtering and selling of misbranded/non-inspected and/or adulterated pork meat products to the general public.

Whereas, Mr. Harold R. Newby stated in a signed statement dated March 13, 2014, that he has been slaughtering, processing, storing, offering for sale, and selling (without the benefit of N.C.D.A. or U.S.D.A. inspection), three to four swine carcasses per week for the past forty (40) years in which he slaughtered and processed into pork sausage and various other pork products.

Whereas, Harold R. Newby granted verbal permission for FCO's Moody, Lackman, and Philyaw to inspect a scald vat and hog pens located on property owned by Mr. Harold R. Newby on Herbert Faucette Road, Bullock, North Carolina 27507.

Whereas, FCO's Moody, Lackman, and Philyaw found that the scald vat was suspended over an open pit so wood could be placed underneath to heat the water. The scald vat water was filled with hair, a large amount of rust, and other debris from the open air pit. The scald vat did not have a drain plug or did not appear to have any other way to drain the rusty and filthy water

from the vat.

Whereas, FCO's Moody, Lackman, and Philyaw observed a wooden platform that was used to shave the hair from the swine, this wooden platform had blood stains and hair from previous day(s) usage. Hair was scattered all around the scald vat on the ground from previous day(s) usage.

Whereas, on June 30, 2014, the Department issued to Mr. Newby a civil penalty assessment finding that Mr. Newby had been found to be slaughtering, processing, storing, offering for sale and/or selling misbranded/ non-inspected and/or adulterated pork meat to the general public. In addition, the unsanitary conditions in the location/facility were such that all products slaughtered, processed, or stored, would be rendered adulterated in violation of N.C. General Statutes §§ 106-549.17, 106-549.23;

Whereas, in its civil penalty assessment, the Department imposed upon Mr. Newby a civil penalty of eight thousand dollars (\$8,000.00) for violation of N.C. General Statutes §§ 106-549.17 and 106-549.23; and

Whereas Mr. Newby denies he is guilty of any willful violation of the above-referenced laws and regulations and their consent to the terms of this Agreement is made in order to timely resolve this matter and shall not be constituted as an admission of guilt, as to any of the violations alleged herein.

WHEREAS the parties desire to resolve these matters without further litigation.

NOW THEREFORE, the parties agree as follows

- 1) The parties further understand and agree that Mr. Newby may use the slaughtering and processing equipment only for the slaughtering or processing of animals of his own raising, and the preparation by them and transportation in intrastate commerce of the carcasses, parts thereof, meat and meat food products of

such animals exclusively for use by them and members of their households and their nonpaying guests and employees, as provided in N.C. Gen. Stat. § 106-549.27(a)(1);

2) Mr. Newby hereby agrees to pay the sum of five thousand dollars (\$5,000.00) to the Department as consideration for this Settlement Agreement. The parties agree and acknowledge that the Department is required by law to turn said payment over to the Department of Public Instruction. Mr. Newby may pay this sum in eleven monthly installments of four hundred and sixteen dollars and sixty-seven cents (\$416.67) and a final payment of four hundred and sixteen dollars and sixty-three cents (\$416.63) due on the first day of each month, beginning on October 1, 2014. A monthly payment is late and Mr. Newby is in breach of this Settlement Agreement if payment is received after 5:00 p.m. of the date due. Receipt of payment in an envelope postmarked or otherwise dated by commercial courier or the U.S. Postal Service on or before the date due, which is received after the date due, shall be deemed to be on time;

3) As further consideration Mr. Newby has signed Appendix A, a Confession of Judgment in favor of the Department for the sum of five thousand dollars (\$5,000.00). The Department shall not file said Confession of Judgment with the Court unless the Mr. Newby violates this settlement agreement by:

a. Failing to pay the \$5,000.00 within the time and according to the terms provided in this Settlement Agreement;

or

b. Committing another violation of the laws and/or rules enforced by the Meat and Poultry Inspection Division, specifically but not limited to Articles 49B and 49C of the North Carolina Mandatory Meat and Poultry Inspection Law.

4) Respondent may deem Mr. Newby to be in breach of this Settlement Agreement upon finding:

- a. Mr. Newby has failed to make timely payment; if Mr. Newby finds he lacks sufficient funds to make a monthly payment, he shall notify the Respondent before payment is due and request that the payment be rolled over to the next month.
- b. The following month Mr. Newby shall bring his payments up to date (paying double the usual monthly payment) unless he has received permission from the Respondent to pay less than double the monthly payment, \$833.34.
- c. Failure to make payment in full each month without prior notification to the Respondent shall constitute a material breach of this Settlement Agreement;
- d. If the Respondent files the Confession of Judgment for such breach or any other breach of this Settlement Agreement, it shall not excuse Mr. Newby from his continuing obligation to make monthly payments.
- e. When it files the Confession of Judgment, the Judgment shall reflect and give credit for payments made up to date of filing of the Confession of Judgment against the amount of \$5,000.00.
- f. There is no interest charged on the unpaid balance and no penalty for early payment.

5) Respondent hereby reserves the right to forego filing Appendix A, the Confession of Judgment, against the Mr. Newby if it finds a good reason to refrain from doing so.

However, if Respondent in the sound exercise of its discretion refrains from filing Appendix A, this is not a waiver of its right to do so later;

- 6) Mr. Newby hereby waives his right to a hearing contesting the civil penalty assessment in the North Carolina Office of Administrative Hearings;
- 7) Mr. Newby hereby agrees not to offer any land that he owns, rents, or controls, together or separately, as a place to slaughter and/or process animals for food, except as provided by law for animals of his own raising, to be fed to his own family, employees or non-paying guests;
- 8) Mr. Newby hereby promises and grants to the Department the right to enter the property located at 3692 Herbert Faucette Road, Bullock, NC, and all other properties that he currently owns, either jointly or individually, leases or has use of. Mr. Newby shall, within five days after Mr. Newby's execution of this Settlement Agreement, provide to the Department a list of all the properties he currently owns, leases or has use of, both jointly or individually, including the properties' street address or gps coordinates. Mr. Newby shall provide to the Department a list of all said properties, Appendix B, which is attached hereto and incorporated herein by reference.

Respondent's right to enter and to inspect those properties and their buildings shall be without notice, at any time (24/7). Mr. Newby further promises and agrees that, upon purchasing, leasing or otherwise receiving the use and/or control of any other parcels of land in the State of North Carolina after their execution of this agreement, they shall:

- a) notify the Department within forty-eight hours of receiving access to or control of said parcels of land;
- b) grant Department the same right of entry and inspection thereto; and

c) provide the Department with the newly acquired land parcel's address or
gps coordinates.

9) The Department hereby agrees that the right to conduct such inspections shall not
include the right to enter and inspect any building on any of the properties mentioned
herein that are used solely as human habitation; and

10) Mr. Newby further agrees not to commit any other violations of the North Carolina
Meat and Poultry Inspection Law, articles 49B, 49C and 49H.

12) In return, the Department hereby agrees as follows:

a. The Department accepts five thousand dollars (\$5,000.00) in compromise of
its civil penalty assessment in order to settle this matter;

b. The Department agrees not to file Mr. Newby's Confession of Judgment,
Appendix A, unless Mr. Newby violates this Settlement Agreement;

c. The Department hereby agrees that, if Mr. Newby complies with the
Settlement Agreement completely and commits no violations of the North
Carolina Meat and Poultry Inspection Law from the date the Settlement
Agreement is signed by both parties and for twelve months thereafter, the
Department will return the original Confession of Judgment to Mr. Newby for
cancellation;

13) In the alternative, if, following signing and execution by both parties of the
Settlement Agreement, Mr. Newby:

a) applies for a license to operate a custom slaughter facility; and

b) receives a license to operate a custom slaughter facility; and

c) opens a licensed custom slaughter facility; and

d) continues to operate a licensed custom slaughter facility for one year after receiving that license,

the Department will return the original Confession of Judgment to Mr. Newby for cancellation;

14) Upon receipt of the final payment bringing Mr. Newby's payments up to \$5,000.00, the Department shall surrender Appendix A, the original of Petitioner's Confession of Judgment, to Mr. Newby, unless Appendix A has been filed with the Clerk of Court of the county in which Mr. Newby resides.

The parties mutually agree to act in good faith in the implementation of this agreement. The parties agree to bear their own attorneys fees and costs. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates

indicated below:

Harold R. Newby
HAROLD R. NEWBY

Date: 8-6-2014

ATTORNEY FOR NCDA&CS

Barry H. Bloch
Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: 8/8/2014

FOR RESPONDENT:

W. Alan Wade
W. Alan Wade
Director, Meat and Poultry Inspection Division
North Carolina Department of Agriculture & Consumers Services

Date: 8-6-2014

NORTH CAROLINA INDUSTRIAL COMMISSION
RALEIGH, NORTH CAROLINARELEASE OF TORT CLAIM UNDER GENERAL STATUTES 143-291 *et seq.*

KNOW ALL MEN BY THESE PRESENTS, That I/We, JA King & Company (Claimant(s)), for the sole consideration of \$621.83, to be paid by the State of North Carolina and NC Department of Agriculture and Consumer Services the payment whereof being made under the provision of General Statutes 143-291 *et seq.*, do hereby release and discharge and by these presents do for myself/ourselves, my/our heirs, executors, administrators and assigns release and forever discharge the State of North Carolina, the North Carolina Department of Agriculture and Consumer Services, and their current and former officers, employees, servants, and agents, including but not limited to Standards Division Laboratory, and all other persons and entities, of and from any and all claims, demands, damages, actions, and causes of action of whatever kind or nature, on account of an incident on August 22, 2018 in Wake County, NC regarding damage to a weight cart.

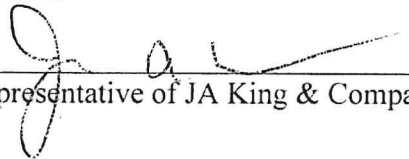
I/We also acknowledge and agree that all bills of any kind or nature whatsoever I/we incurred as a result of the damages that I/we sustained as a result of said incidents have been paid or will be paid out of these proceeds and I/we agree to indemnify and hold harmless the parties released hereby from any claims by any person or entity seeking the recovery of unpaid bills. I/We further acknowledge that no lien by any third party exists on the proceeds of this settlement and I/we agree to indemnify and hold harmless the parties being released from any claims by any person or entity seeking the recovery of or enforcement of such liens.

I/We further hereby agree to indemnify and save harmless the released parties of and from any and all claims of any sort from any party claiming to be subrogated or to have any other type of legal or equitable claim to the proceeds or any part of the proceeds paid in exchange for this release. This indemnification extends to and includes indemnification from all costs and attorney fees that might be incurred as a result of such claim.

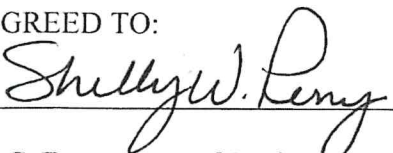
I/We understand that this release is made as compromise to avoid expense and to terminate all controversy and/or claims for injuries or damages of whatever nature, known or unknown, including future developments thereof, in compromise of a disputed claim, and it is therefore specifically agreed that this release shall be a complete bar to all claims or suit for injuries or damages of whatsoever nature resulting or to result from said accident.

IN WITNESS WHEREOF We have hereunto set our hands, this ^x 31st day of ^x August, 2018.

Claimants:

x 
As representative of JA King & Company

AGREED TO:


N.C. Department of Justice Investigator

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES MARKETING DIVISION
WESTERN NC FARMERS MARKET

IN THE MATTER OF JAMES LUTHER SEXTON, III

SETTLEMENT AGREEMENT
RECITALS

This Settlement Agreement and Release is made and entered into the date reflected opposite the signature of Douglas F. Sutton, appearing below on page three, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter the "Department") and JAMES LUTHER SEXTON (hereinafter "Mr. SEXTON").

WITNESSETH:

WHEREAS, Mr. Sexton rented space to sale goods and produce at the Western North Carolina Farmers Market from September 25, 2015 thru November 14, 2015 and agreed to a daily rental at the rate of Twenty-Four Dollars (\$24.00) per day.

WHEREAS, Mr. Sexton agreed to pay the monthly electric charges for said space.

WHEREAS, Mr. Sexton failed to pay the daily rental and electric charges from September 25, 2015 through November 14, 2015 and is currently indebted to the Department in the sum of One Thousand Two Hundred Fifty-Eight Dollars for past due space rental and electric charges.

WHEREAS, the Department has requested that Mr. Sexton pay the outstanding rent and electric charges totaling \$1,258.00.

NOW, THEREFORE, IT IS RESOLVED THAT, in consideration of Mr. Sexton's promise to pay to the Department the sum of One Thousand Two Hundred Fifty-Eight Dollars, (\$1,258.00), by paying \$258.00 upon the execution of this Settlement Agreement and the balance in five equal monthly payments of \$200.00 per month according to the terms set forth below, and the Department hereby agrees to waive any interest, and for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Mr. Sexton shall pay the sum of \$258.00 simultaneously with the execution of this document.
2. Mr. Sexton shall pay the balance of \$1,000.00 in five equal payments of \$200.00. Each payment shall be due and payable on the 15th day of the month, **with the first payment of \$200.00 due on September 15, 2017. The final payment of \$200.00 shall be due on**

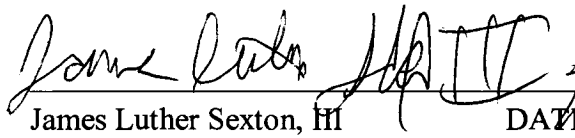
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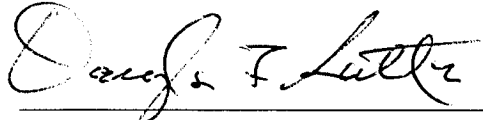
²⁹
January 15, 2018. The Department shall deem Mr. Sexton's monthly payment as being received timely if Mr. Sexton sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the 1st day of the month in which that payment is due, properly addressed to Douglas Sutton, NC Department of Agriculture, 570 Brevard Road, Asheville, NC 28806.

3. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Sexton agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
4. The Department hereby agrees that, so long as Mr. Sexton complies with the terms of this Settlement Agreement, the Department shall forebear from bringing a civil action against Mr. Sexton to collect the sum of money owed under the above-mentioned agreement, and shall forebear from filing the Confession of Judgment Mr. Sexton has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, attached as Appendix I, only if Mr. Sexton fails to make a monthly payment on time, after giving Mr. Sexton notice by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. Sexton three business days to cure his breach by paying the amount due in full.
5. The Department further agrees that, once Mr. Sexton has paid his final monthly payment and the Department has received the \$1,258.00 in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Sexton a document confirming receipt of payment and releasing Mr. Sexton from further liability on this agreement and account. Further, the Department shall provide Mr. Sexton with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Sexton's breach of this Settlement Agreement.
6. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations, and agreements are merged into this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
7. The parties attest that this Settlement Agreement was voluntarily made after ample opportunity to review the document with any individuals, advisors, and counsel so desired.
8. This Settlement Agreement shall be governed and interpreted by the laws of the State of North Carolina.


IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:

 9/9, 2017
DATE

James Luther Sexton, III
436 Crab Creek Road
Hendersonville, NC 28379

 9/9/17
DATE

Douglas F. Sutton
Manager, WNC Farmers Market
570 Brevard Road
Asheville, NC 28806

 10/2/17
DATE

Christopher R. McLennan
Associate Attorney General
North Carolina Department of Justice
P. O. Box 629
Raleigh, NC 27602-0629

STATE OF NORTH CAROLINA

COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, STRUCTURAL PEST
CONTROL AND PESTICIDES DIVISION,

Complainant,

v.

JAMES W. BELL, II,

Respondent.

BEFORE THE NORTH CAROLINA
STRUCTURAL PEST CONTROL
COMMITTEE

File No. SPE13-7

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. §§ 150B-22 and 150B-41(c) which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, and subject to final approval by the North Carolina Structural Pest Control Committee ("Committee"), this Settlement Agreement is made between the Structural Pest Control and Pesticides Division of the North Carolina Department of Agriculture and Consumer Services, herein referred to as Complainant, and James W. Bell, II, hereinafter referred to as Respondent.

1. At all times pertinent to this matter, Respondent held Structural Pest Control License Number 1676W which is currently registered to his business address at MZ Bugs Termite Control, LLC, 638 Spartanburg Highway, Suite 70, No. 4, Hendersonville, North Carolina.
2. A resident of the Village at Mayfaire in Wilmington, New Hanover County, North Carolina, told a pest control company that he was concerned about the pest control company that was performing a termite treatment to his property.
3. On February 28, 2013, Complainant's Field Inspector went to the Village at Mayfaire and observed a service vehicle identified as B & B Industrial Termite Control.
4. Complainant's Field Inspector introduced himself to the driver, David Allen Bell. David Bell gave Complainant's Field Inspector a business card for MZ Bugs Termite Control, Kingsport, Tennessee. David Bell did not have a CA or RT card.
5. David Bell stated that MZ Bugs Termite Control provided the preconstruction treatment at the Village at Mayfaire. He said he was treating Building 648 Unit 102 after termites had swarmed.
6. David Bell further stated that his family owned B & B Industrial Termite Control and MZ Bugs Termite Control. He said he was certified under Larry Bell's Structural Pest Control License No. 1768W which was registered to B & B Industrial Termite Control. Review of the

Section's licensing records showed that Larry Bell's license had lapsed on July 1, 2012. David Bell's certification, CA1768W, was, therefore, also inactive. David Bell did not have a CA or RT card under MZ Bugs Termite Control.

7. Complainant's Field Inspector observed David Bell dig a shallow trench along the back of Building 648 Unit 102. When asked about rodding into the trench, David Bell replied he did not have a rod.

8. David Bell told Complainant's Field Inspector that he was applying fifty gallons of Premise Pro to the soil. Complainant's Field Inspector observed David Bell apply the Premise Pro solution to the upper two feet of the foundation wall allowing the chemical to run down into the trench. David Bell was standing six feet from the foundation while power washing the foundation wall with the Premise Pro solution. The Premise Pro solution splashed onto plants, down spouts, drain tiles and a gas line.

9. Complainant's Field Inspector told David Bell that the pressure was too high. David Bell tried to lower the pressure but the pressure gauge was broken. David Bell applied fifty gallons of the Premise Pro solution in four minutes and twenty-five seconds. He did not mix the Premise Pro solution into the soil before or after the treatment and covered the trench with untreated soil. He failed to check for leaks inside the structure.

10. The registered label for Premise Pro contains the following language:

Apply only to soil or other fill substrate that will accept the solution at the specified rate.

Use a low pressure spray (not to exceed 25 PSI at the treatment tool when the valve is open) to treat soil which will be placed in the trench after rodding. Mix the spray solution with soil as it is being placed in the trench.

After application, the applicator is required to check for leaks.

11. Complainant's Field Inspector inspected David Bell's vehicle and determined the following:

- Insufficient spill control clean up material on the vehicle.
- Unlabeled tank on the vehicle.
- Improperly identified vehicle.
- Nonfunctional pressure gauge on vehicle.

12. Complainant's Field Inspector requested copies of contracts, graphs, treatment records and final treatment records for the Village at Mayfaire from MZ Bugs Termite Control. These records are maintained at the Resident Agent's address in Hendersonville, North Carolina.

13. On March 1, 2013, Complainant's Field Inspector again requested records from MZ Bugs Termite Control.

14. On May 1, 2013, Complainant's Eastern Field Manager contacted the Respondent and arranged to meet with him on May 8, 2013 at 9:30 a.m. at the Resident Agent's address, a UPS box store at 172 Highlands Square Drive in Hendersonville, North Carolina.
15. On May 7, 2013, the Respondent contacted the Complainant's Western Field Manager to change the meeting time to 10:30 a.m.
16. On May 8, 2013, David Bell contacted Complainant's Western Field Manager to let him and Complainant's Eastern Field Manager know that the Respondent was having car trouble.
17. When Complainant's Eastern Field Manager contacted the Respondent, the Respondent stated that his car broke down in Asheville, North Carolina, and he could not make it to Hendersonville, North Carolina. He would call Complainant's Eastern Field Manager to arrange a time to meet.
18. On May 21, 2013, Complainant's Eastern Field Manager contacted the Respondent to request a meeting with him the following week. The Respondent stated that he would be on vacation for six weeks and would contact Complainant's Eastern Field Manager when he returned. He said the warranty at the Village at Mayfaire expired after five years and he sent his nephew to treat the building "out of the goodness of his heart."
19. On March 14, 2014, Complainant's Field Inspector left a voice mail message for the Respondent to arrange a meeting.
20. On March 19, 2014, Larry Bell contacted Complainant's Field Inspector. Larry Bell stated that his father was in Florida until April. Complainant's Field Inspector requested a meeting with Larry Bell on March 26, 2014. Complainant's Field Inspector also requested that Larry Bell bring all documentation for the Village at Mayfaire.
21. On March 24, 2014, Larry Bell contacted Complainant's Field Inspector and stated that he was unable to meet with him and Western Field Manager Reid on March 26, 2014.
22. Later that same day, Complainant's Deputy Director contacted Larry Bell. Larry Bell stated that the contract and treatment records for the Village at Mayfaire were at the Resident Agent's office located at 638 Spartanburg Highway, Suite 70, No. 4, in Hendersonville, North Carolina.
23. Complainant's Field Inspector went to the Resident Agent's address and obtained all the records on March 24, 2014.
24. On September 2, 2014, Insp. Clark and WFM Reid met with Respondent and inspected the records of MZ Bugs Termite Control at that company's registered agent's office at a UPS store with rental mail boxes at 172 Highlands Square Drive in Hendersonville, North Carolina.
25. On November 12, 2014, Larry Bell met with Insp. Clark and WFM Reid at MZ Bugs Termite Control's registered agent's office at 172 Highlands Square Drive in Hendersonville, North Carolina.

26. Insp. Clark found incomplete records consisting only of pre-treatment service records without contracts, and said service records lacked street addresses and lot numbers for the buildings being treated.
34. Larry Bell arrived at the registered agent's office in a work truck bearing the name, "B & B Industrial Termite Control."
35. Insp. Clark inspected the work truck and found unlabeled pesticide containers.
36. Larry Bell stated that he was not aware that all records needed to be updated at the North Carolina (resident agent's) office at least monthly.
37. Insp. Clark determined in the course of the inspection that Respondent's company had been providing pre-construction termite treatments at a building site owned by Cape Fear Community College ("CFCC"), its fine arts center, at 701 N. Third Street, Wilmington, North Carolina.
38. Insp. Willis inspected the CFCC fine art center construction project ("CFCC FAC") on December 8, 2014.
39. The CFCC FAC covers an area slightly less than a city block.
40. The General Contractor for the CFCC FAC is Edifice of Charlotte, NC, and the project manager is David Gadella ("Mr. Gadella").
41. The CFCC FAC structure is a floating slab which had been poured when Insp. Willis visited the site on December 8, 2014.
42. Mr. Gadella stated that the slab:
 - a) was 80,000 square feet in area;
 - b) had a minimum footer of four feet;
 - c) had a perimeter of 1,260 feet; and
 - d) had a partial basement along the back of the slab.
43. During his inspection on December 8, 2014, Insp. Willis found that fresh concrete was being poured adjacent to the back outside foundation wall.
44. Mr. Gadella told Insp. Willis that, two weeks earlier, 280 linear feet of sidewalk concrete had been poured adjacent to the outside foundation wall without this area being treated for termites.
45. Mr. Gadella told Insp. Willis that no employees of MZ Bugs, Respondent's company, had been onsite to do termite treatments since August, 2014.
46. Insp. Willis asked Mr. Gadella to contact him before the next termite treatment is performed and explained to Mr. Gadella that the outside foundation wall needed to be treated for termite control before the concrete sidewalk is poured.

47. Insp. Willis determined that there are 620 linear feet of outside foundation remaining to be treated for termite control at CFCC FAC. Insp. Willis reviewed records obtained from Respondent's business, MZ Bugs, and found that Respondent or his employees had treated the inside foundation walls at CFCC FAC with 372 gallons of BASELINE with a concentration of 0.12%.
48. Insp. Willis reviewed records obtained from Respondent's business, MZ Bugs, and found that Respondent or his employees had treated the main floor slab at CFCC FAC with 1910 gallons of BASELINE with a concentration of 0.12%.
49. Insp. Willis found no records among those obtained from Respondent's business, MZ Bugs, showing that Respondent or his employees had made a termite treatment to CFCC FAC's outside foundation wall before Edifice poured concrete slab to form the building's sidewalk.
50. Insp. Willis reviewed the records obtained from Respondent's business, MZ Bugs, for work performed at CFCC FAC and found that those records failed to state what portions of the structure were treated each time a treatment was made.
51. WFM Reid asked Respondent to provide its records for CFCC FAC for work done after August, 2014, and a copy of its contract with Edifice for termite treatment at CFCC FAC.
52. Respondent has failed to provide Complainant with any records for CFCC FAC for work done after August, 2014, and a copy of its contract with Edifice for termite treatment at CFCC FAC as of the date of this Notice of Hearing.
53. On February 23, 2015, Complainant received a request from Respondent to change the name of the company associated with his pest control operator's license from MZ Bugs to B & B Industrial Termite Control Co., without a certificate of liability insurance reflecting the same company name. Complainant could not change its records to reflect the name change without the insurance certificate.
54. As a result of its investigation, Complainant alleges that Respondent, either by act or omission, violated the following provision(s) of the North Carolina Structural Pest Control Law and/or Regulations:

N.C. Gen. Stat. § 106-65.25 Phases of structural pest control; prohibited acts; license required; exceptions.

- (c) It shall be unlawful for any licensee to do any of the following:
 - (2) Fail to supervise the structural pest control performed out of the licensee's home office or any branch office under the licensee's management.

N.C. Gen. Stat. § 106-65.28. Revocation or suspension of license or identification card.

(a) Any license or certified applicator's identification card or registered technician's identification card may be denied, revoked or suspended by a majority vote of the Committee for any one or more of the following causes:

- (1) Misrepresentation for the purpose of defrauding; deceit or fraud; the making of a false statement with knowledge of its falsity for the purpose

- of inducing others to act thereon to their damage; or the use of methods or materials which are not reasonably suitable for the purpose contracted.
- (2) Failure of the licensee or certified applicator to give the Committee, the Commissioner, or their authorized representatives, upon request, true information regarding methods and materials used, or work performed.
 - (3) Failure of the licensee or certified applicator to make registrations herein required or failure to pay the registration fees.
 - (5) Willful violation of any rule or regulation adopted pursuant to this Article.
 - (9) Using any pesticide in a manner inconsistent with its labeling.
 - (12) Failure of a licensee or certified applicator to pay the original or renewal license or identification card fee when due and continuing to operate as a licensee or a certified applicator.

N.C. Gen. Stat. § 106-65.30. Inspectors; inspections and reports of violations; designation of resident agent.

(b) Prior to the issuance or renewal of a license or certified applicator's identification card, every nonresident owner of a business performing any phase of structural pest control work shall designate in writing to the Commissioner or his authorized agent a resident agent upon whom service of notice or process may be made to enforce the provisions of this Article and rules and regulations adopted pursuant to the provisions hereof or any civil or criminal liabilities arising hereunder.

02 N.C. Admin. Code 34 .0325 DUTY OF LICENSE HOLDER TO CONTROL ACTIVITIES

(e) It shall be a violation of the rules of the Committee for any license holder to fail to adequately control, direct, and supervise the structural pest control activities of his/her office or employees.

02 N.C. Admin. Code 34 .0405 FOLLOWING PESTICIDE LABEL

(b) It shall be a violation of these Rules to use any pesticide in a manner inconsistent with its labeling.

02 N.C. Admin. Code 34 .0406 SPILL CONTROL

Licensees and certified applicators shall maintain adequate spill control materials, equipment, or a combination thereof, based upon the type and quantity of pesticides present, at all locations used to store pesticides and on all service vehicles used to store or transport pesticides.

02 N.C. Admin. Code 34 .0601 AGREEMENTS

(a) Before any treatment is started, the licensee or his authorized agent shall execute, and furnish to the property owner or his authorized agent, a written proposal informing the property owner or his authorized agent, as to the type and quality of work that is to be performed. The written proposal shall contain that information specified in 02 NCAC 34 .0605 and, upon written acceptance by the property owner or authorized agent, shall suffice as the written agreement, required by Paragraph (b) of this Rule.

02 NCAC 34 .0320 DISPLAY OF LICENSE NUMBER ON SERVICE VEHICLE

The license number and phase(s) of each licensee in charge of an office or the company name of the licensee as specified in Rule .0326 shall be prominently displayed on both sides of all service vehicles of that office, but shall not be required on vehicles used exclusively in selling structural pest control work. Vehicles requiring display of license number(s) and phase(s) or company name shall bear such display within 30 days after the date on which said vehicle(s) is required to be so identified. The license number and license phase(s) or company name displayed on said vehicles of an office shall be the same as the license number and license phase(s) or company name borne by the license or the person in charge of that office. All said vehicles of a company may bear the same license number even though the company may have more than one licensee or office; provided, however, notice is made in writing annually to the committee and the committee approves the license number used in such cases. The license number and license phase(s) or company name and all other letters displayed on said vehicles, shall be a minimum of two inches in height, in bold print on a background of contrasting color. The license number shall be designated as: North Carolina Pest Control License No. _____. This may be abbreviated to N.C. Pest Control Lic. _____.

02 N.C. Admin. Code 34 .0325 DUTY OF LICENSE HOLDER TO CONTROL ACTIVITIES

(e) It shall be a violation of the rules of the Committee for any license holder to fail to adequately control, direct, and supervise the structural pest control activities of his/her office or employees.

02 N.C. Admin. Code 34 .0328 RECORDS: PESTICIDES AND APPLICATION EQUIPMENT USED

- (a) All required structural pest control records and pesticides and application equipment used by the licensee or noncommercial certified applicator shall be maintained at the office location to which the license or certified applicator's card is issued.
- (b) Notwithstanding the requirements of Paragraph (a) of this Rule, a licensee may request permission, annually, from the Division, to maintain records, pesticides, and application equipment in a location other than the office location specified in Paragraph
- (c) All such records, pesticides, and equipment shall be made available for inspection during regular business hours upon request by the Division.

02 NCAC 34 .0402 LABELING PESTICIDE CONTAINERS

(a) All pesticide concentrates and poison baits stored in containers other than original shall be prominently labeled to give the following information:

- (1) manufacturer's complete brand name of product;
- (2) percentage of each active ingredient;
- (3) EPA registration number;
- (4) signal word (as it appears on the pesticide label);
- (5) use classification, if classified, (as it appears on the label).

(b) All pesticide containers, except those described in Paragraph (a) of this Rule and application equipment of 15 gallon capacity or less, shall be prominently labeled to give the following information:

- (1) manufacturer's complete brand name of product;
- (2) the word "dilute" if diluted;

- (3) if diluted, kind of diluent (water, oil, dust, etc.);
- (4) signal word (as it appears on the pesticide label).

02 N.C. Admin. Code 34 .0405 FOLLOWING PESTICIDE LABEL

(b) It shall be a violation of these Rules to use any pesticide in a manner inconsistent with its labeling.

02 NCAC 34 .0506 MIN REQUIRE/SUBTERRANEAN TERMITE PREV/COMMERCIAL BLDGS UNDER CONST

(b) Minimum Treatment Requirements:

- 3) Establish a horizontal termiticide barrier in the soil within three feet of the main foundation, under slabs, such as patios, walkways, driveways, terraces, gutters, etc. Treatment shall be performed before slab is poured but after fill material or fill dirt has been spread.

02 N.C. Admin. Code 34 .0601 AGREEMENTS

(a) Before any treatment is started, the licensee or his authorized agent shall execute, and furnish to the property owner or his authorized agent, a written proposal informing the property owner or his authorized agent, as to the type and quality of work that is to be performed. The written proposal shall contain that information specified in 02 NCAC 34 .0605 and, upon written acceptance by the property owner or authorized agent, shall suffice as the written agreement, required by Paragraph (b) of this Rule.

02 NCAC 34 .0604 WOOD-DESTROYING ORGANISMS RECORDS

(a) A duplicate of each written agreement and waiver (if applicable) for the control or prevention of any wood-destroying organism shall be kept by the licensee for a minimum of two years beyond the expiration date of the written agreement. The duplicate of each written agreement shall contain, in addition to the information specified under 02 NCAC 34 .0605, the following:

(5) In addition, for all treatments performed pursuant to 02 NCAC 34 .0505 or .0506, the following records shall be made and maintained:

- (B) the portion or portions of the structure treated;

02 N.C. Admin. Code 34 .0904 PROHIBITED ACTS

(i) No certified applicator or licensee or their employees shall advertise or contract in a company name style contradictory to that shown on the certified applicator's identification card or license certificate; provided, however, when there is a sale of a business or other name change the company may use both names together for a period not to exceed three years from the date of the name change or sale of business.

25. Each of the above violations of the North Carolina Structural Pest Control Law and/or Regulations is subject to a civil penalty which may be assessed by the Committee as follows:

N.C. Gen. Stat. § 106-65.41 Civil penalties.

A civil penalty of not more than two thousand dollars (\$2,000) may be assessed by the Committee against any person for any one or more of the causes set forth in G.S. 106-65.28(a)(1) through (12) and G.S. 106-65.28(a)(14) and (15), or who violates or

directly causes a violation of any provision of this Article or any rule adopted pursuant to this Article.

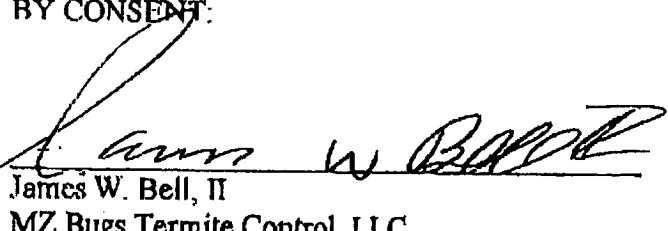
26. The parties are willing to accept a settlement of the dispute between them. This Agreement is made in order completely and finally to resolve the parties' claims and differences as stated above upon the following conditions:

- (a) That the Committee hereby orders that Respondent's Structural Pest Control License Number 1676W, be suspended. Said suspension is hereby stayed until either:
 - i) the Complainant issues a Structural Pest Control License to Larry Bell or another employee or corporate officer of MZ Bugs Termite Control, LLC; or
 - ii) sixty days from the effective date of this Settlement Agreement,which ever occurs first. The term of suspension is two years from the date the Committee approves this Settlement Agreement;
- (b) That Respondent shall pay the sum of two thousand dollars (\$2,000.00) to the North Carolina Department of Agriculture and Consumer Services within thirty (30) days of the Committee's approval of this Agreement;
- (c) That Respondent agrees that if Respondent fails to pay the agreed upon sum of two thousand dollars (\$2,000.00) within thirty (30) days of the Committee's approval of this Agreement, this Agreement shall constitute a civil penalty assessment of the Committee of two thousand dollars (\$2,000.00) for violations of the above-stated North Carolina Structural Pest Control Law and Regulations; failure to pay the civil penalty may subject Respondent to criminal and/or additional administrative charges;
- (d) That Respondent acknowledges his right to a hearing before the Committee of the civil penalty assessment in paragraph 26(b) and waives that right by consenting to the terms of this Agreement. Respondent further agrees that the collection procedures outlined in N.C. Gen. Stat. § 106-65.41 may be instituted based on the civil penalty assessment contained in paragraph 26(b) of this Agreement. Respondent further agrees that he waives any right to a review of this matter as may be established under Art. 4A of the North Carolina Administrative Procedure Act, Ch. 150B, N.C. General Statutes;
- (e) That Respondent acknowledges that, upon acceptance and execution of this Agreement by the Committee, the Agreement shall become public record within the meaning of Chapter 132 of the North Carolina General Statutes and shall be subject to public inspection and dissemination pursuant to the provisions thereof;
- (f) That Respondent acknowledges that this Settlement Agreement constitutes full and fair written notice from the Committee, as provided in G.S. 106-65.33(a), that

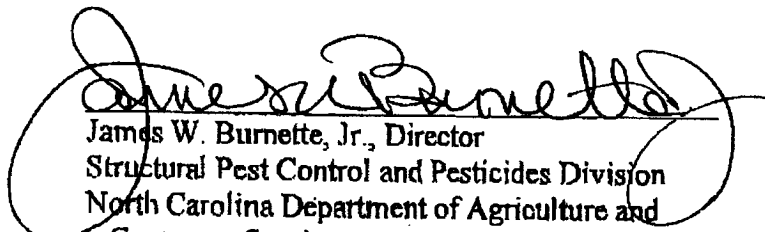
in the event that the Respondent commits any further violation of the Structural Pest Control Act, G. S. 106-65.22 et seq., then the Court in any prosecution of the Respondent for such violations may determine that each day during which Respondent's violation continued or is repeated constitutes a separate violation subject to punishment as a Class 2 misdemeanor.

WHEREFORE, the parties to this action hereby notify the Committee that it will be unnecessary to hold a hearing regarding this matter and respectfully request approval of this Settlement Agreement.

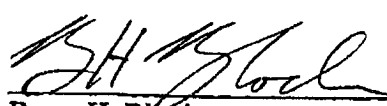
BY CONSENT:


James W. Bell, II
MZ Bugs Termite Control, LLC
638 Spartanburg Highway
Suite 70, No. 4
Hendersonville, NC 28792

7-15-15
Date


James W. Burnette, Jr., Director
Structural Pest Control and Pesticides Division
North Carolina Department of Agriculture and
Consumer Services
1090 Mail Service Center
Raleigh, NC 27699-1090

7/16/2015
Date


Barry H. Bloch
Assistant Attorney General
North Carolina Department of Justice
P.O. Box 629
Raleigh, NC 27602-0629

7/16/2015
Date

APPROVED AND ORDERED FILED,

this the 21 day of July, 2015.

NORTH CAROLINA STRUCTURAL PEST CONTROL COMMITTEE

BY: 
Chairman

STATE OF NORTH CAROLINA

COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE

DISTRICT COURT DIVISION

08 CVD 16795

STATE OF NORTH CAROLINA, ex rel.,)
NORTH CAROLINA DEPARTMENT OF)
AGRICULTURE AND CONSUMER SERVICES)

Plaintiff,)

v.)

JEFF HARRIS,)

Defendant.)

SETTLEMENT AGREEMENT

RECITALS

Plaintiff, the North Carolina Department of Agriculture and Consumer Services (hereinafter "Plaintiff" or "NCDA&CS") and Defendant, Jeff Harris (hereinafter "Defendant" or "Harris") desire to fully and finally settle this and all other disputes and controversies surrounding Plaintiff's assessment of a civil penalty against Defendant for Defendant's violations of the North Carolina Animal Disease Act, N.C. General Statute §106-405.17, and the regulation promulgated thereunder, 2 N.C. Administrative Code 52B.0406, for Defendant's failure to possess current Equine Infections Anemia Test Records for ponies at the North Carolina State Fairgrounds in Raleigh, North Carolina on March 9, 2007 and for Defendant's failure to possess current Equine Infections Anemia Test Records for horses at the Benson Mule Days in Benson, North Carolina on September 22, 2006 at North Carolina, and Plaintiff's civil action in Wake County District Court for collection of said civil penalties.

Whereas, the Defendant was assessed Civil Penalties and as of February 12, 2015 is indebted to the Plaintiff in the sum of Three Thousand Eight Hundred Sixty One Dollars and Thirty-Two Cents (\$3,861.32) including late fees and interest.

WHEREAS the parties desire to resolve these matters without further litigation.

NOW THEREFORE, the parties agree as follows:

- 1) Defendant hereby agrees to pay the sum of Three Thousand Eight Hundred Sixty-One Dollars and Thirty-Two Cents Dollars (\$3,861.32) in 15 equal payments of \$250.00 and one final payment of \$111.32 to Plaintiff as consideration for this Settlement Agreement, according to the following payment schedule:
 - a. The first two payments in the sum of \$500.00 with Defendant's execution of and return of this Settlement Agreement to Plaintiff;
 - b. The third payment and each subsequent payment on the first day of each month beginning in the month after Defendant returns this signed Settlement Agreement;
- 2) The parties agree and acknowledge that Plaintiff is required by law to turn Defendant's payments over to the North Carolina Department of Public Instruction, retaining only such sums as costs as permitted by law;
- 3) As further consideration Defendant has signed Attachment A, a Confession of Judgment in favor of Plaintiff for the sum of Three Thousand Eight Hundred Sixty-One Dollars and Thirty-Two Cents (\$3,861.32). Plaintiff shall not file said Confession of Judgment with the North Carolina Superior Court, District Court Division, unless Defendant violates this Settlement Agreement by:
 - a. Failing to pay Plaintiff Three Thousand Eight Hundred Sixty-One Dollars and Thirty-Two Cents (\$3,861.32) within the time and according to the terms provided in this Settlement Agreement, in paragraph 1 above;
 - b. Committing a new violation of the laws and or rules cited in the factual summary set forth above;

- 4) If Defendant fails to fulfill the terms of this Settlement Agreement, Plaintiff may, upon providing Defendant 10 days-notice to cure any alleged failure, deem this Settlement Agreement null and void and pursue the civil penalty assessed against Defendant. Defendant shall receive credit for any payments made to Plaintiff against the full amount of the civil penalty before Defendant violated this Settlement Agreement.
- 5) Plaintiff hereby reserves the right to forego filing Attachment A, the Confession of Judgment, against Defendant if it finds a good reason to refrain from doing so. However, if Plaintiff in the sound exercise of its discretion refrains from filing Attachment A, this is not a waiver of its right to do so later; and
- 6) If Defendant receives notice from Plaintiff that Defendant is in material breach of this Settlement Agreement, and Defendant fails to cure said material breach within such time as Plaintiff may grant, Defendant hereby agrees and stipulates that any unpaid portion of the civil penalty of Three Thousand Eight Hundred Sixty-One Dollars and Thirty-Two Cents (\$3,861.32), less credit for payments made to Plaintiff as provided in paragraph 2 shall be immediately due and owing to Plaintiff.

In return, Plaintiff hereby agrees as follows:

A Within ten days (10) of the date both parties have signed this formal written Settlement Agreement, Plaintiff shall voluntarily dismiss his civil case currently pending in the North Carolina Superior Court, Wake County, District Court Division, under the caption and with the file number set forth on page 1 above. The parties stipulate and agree that said dismissal shall be WITH PREJUDICE;

B Plaintiff agrees not to file Defendant's Confession of Judgment, Attachment A, unless Defendant violates this Settlement Agreement.

1. The first part of the document is a letter from the

author to the editor of the journal, in which he expresses his

gratitude for the publication of his

work and mentions the fact that he has received a number of

very kind and helpful comments from the reviewers.

2. The second part of the document is a letter from the

editor to the author, in which he expresses his

pleasure in receiving the author's work and

mentions the fact that he has received a number of

very kind and helpful comments from the reviewers.

3. The third part of the document is a letter from the

author to the editor of the journal, in which he expresses his

gratitude for the publication of his work and mentions the fact that he

has received a number of very kind and helpful comments from the reviewers.

4. The fourth part of the document is a letter from the

editor to the author, in which he expresses his pleasure in receiving the

author's work and mentions the fact that he has received a number of

very kind and helpful comments from the reviewers.

5. The fifth part of the document is a letter from the

author to the editor of the journal, in which he expresses his

gratitude for the publication of his work and mentions the fact that he

has received a number of very kind and helpful comments from the reviewers.

6. The sixth part of the document is a letter from the

editor to the author, in which he expresses his pleasure in receiving the

C Plaintiff hereby agrees that, if Defendant fully and completely complies with this Settlement Agreement, Plaintiff will return Attachment A, the original Confession of Judgment to Defendant for cancellation;

The parties mutually agree to act in good faith in the implementation of this Settlement Agreement. The parties agree to bear their own attorneys fees and costs. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

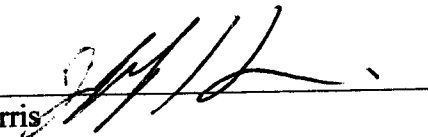
The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates

indicated below:

Jeff Harris 

Date: 4/1/15

ATTORNEY FOR NC DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES

Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: _____

FOR NC DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES

R. Douglas Meckes, DVM
State Veterinarian
Veterinary Division
North Carolina Department of Agriculture & Consumers Services

Date: _____

Paid In Full
5/29/2018

STATE OF NORTH CAROLINA
COUNTY OF DUPLIN

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES DIVISION OF SOIL AND
WATER CONSERVATION

IN THE MATTER OF JEFFREY K. ALBERTSON;

FOREST DEVELOPMENT PROGRAM NO. 5402

SETTLEMENT AGREEMENT
RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of Sheila Head, appearing below on page three, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter the "Department") and Jeffrey K. Albertson (hereinafter "Mr. Albertson").

WITNESSETH:

WHEREAS, on June 13, 2013, Mr. Albertson entered into three contracts for forestation services with the North Carolina Forest Service (hereinafter "NCFS"), bearing the Forest Development Program Application Number 5402 (hereinafter the "agreement") for savannah bedding, v-blade shear, and tree planting service. The NCFS approved this agreement and provided said services totaling \$11,462.50.

WHEREAS, pursuant to said agreement, Mr. Albertson was required to pay NCFS a percentage of the bill upon invoice, totaling \$6,912.50.

WHEREAS, on April 29, 2014, NCFS billed Mr. Albertson. NCFS subsequently sent Mr. Albertson a second notice. Mr. Albertson contacted NCFS on March 15, 2015, and stated that he fell into hardship and wanted to pay \$200.00 by April, 2015, with the remaining balance paid by the end of June, 2015. NCFS agreed to the proposal. However, after receiving an initial payment of \$200.00 on May 15, 2015, Mr. Albertson failed to pay his remaining balance in full. Instead, Mr. Albertson made partial payments periodically, to which NCFS accepted. The partial periodic payments stopped and no additional payments have been received by NCFS after April 18, 2016.

WHEREAS, NCFS determined that Mr. Albertson breached the agreement by failing to make the required payments and currently owes an outstanding balance of \$4,612.50.

WHEREAS, the Department has requested that Mr. Albertson pay his portion of the remaining balance of the agreement, totaling \$4,612.50. The Department and Mr. Albertson desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

NOW, THEREFORE, IT IS RESOLVED THAT, in consideration of Mr. Albertson's promise to pay to the Department the sum of \$4,612.50, in six initial equal monthly payments of \$150.00 and one final (seventh) payment of \$3,712.50, according to the terms set forth below, and the Department hereby agrees to waive any interest, and release Mr. Albertson from any and all liability arising out of the dispute upon receipt of the final payment, and for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Mr. Albertson shall pay the sum stated above in six initial equal payments of \$150.00 and one final (seventh) payment of \$3,712.50. Each payment shall be due and payable on the fifteenth of the month, **with the first payment of \$150.00 due on December 15, 2016. The final payment of \$3,712.50 shall be due on June 15, 2017.** The Department shall deem Mr. Albertson's monthly payment as being received timely if Mr. Albertson sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the fifteenth day of the month in which that payment is due, properly addressed to Janine Owens, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Albertson agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Mr. Albertson complies with the terms of this Settlement Agreement, the Department shall forebear from bringing a civil action against Mr. Albertson to collect the sum of money owed under the above-mentioned agreement, and shall forebear from filing the Confession of Judgment Mr. Albertson has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, attached as Appendix I, only if Mr. Albertson fails to make a monthly payment on time, after giving Mr. Albertson notice by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. Albertson three business days to cure his breach by paying the amount due in full.
4. The Department further agrees that, once Mr. Albertson has paid his final monthly payment and the Department has received the \$4,612.50 in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Albertson a document confirming receipt of payment and releasing Mr. Albertson from further liability on this agreement and account. Further, the Department shall provide Mr. Albertson with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Albertson's breach of this Settlement Agreement.
5. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.

6. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
7. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations, and agreements are merged into this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
8. The parties attest that this Settlement Agreement was voluntarily made after ample opportunity to review the document with any individuals, advisors, and counsel so desired.
9. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:

Jeffrey K. Albertson 12-15-16
Jeffrey K. Albertson DATE
621 Durwood Evans Road.
Beulaville, NC 28518

Sheila Head 1/6/17
Sheila Head DATE
Accounting Clerk
North Carolina Forest Service
2958 Rouse Road
Kinston, NC 28504-7320

Chris McLennan 1/24/17
Christopher R. McLennan DATE
Associate Attorney General
North Carolina Department of Justice
P. O. Box 629
Raleigh, NC 27602-0629

STATE OF NORTH CAROLINA

COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, STRUCTURAL PEST
CONTROL AND PESTICIDES DIVISION,

Complainant,

v.

JORGE RIVERO & EL CLUB
MEXICANO, INC.,

Respondents.

BEFORE THE NORTH CAROLINA
STRUCTURAL PEST CONTROL
COMMITTEE

File No. SPW14-14

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. §§ 150B-22 and 150B-41(c) which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, and subject to final approval by the North Carolina Structural Pest Control Committee ("Committee"), this Settlement Agreement is made between the Structural Pest Control and Pesticides Division of the North Carolina Department of Agriculture and Consumer Services, herein referred to as Complainant, and Jorge Rivero & El Club Mexicano, Inc., hereinafter referred to as Respondents.

1. At all times pertinent to this matter, Respondent Jorge Rivero was the president of El Club Mexicano, 420 Waketa Drive, Asheboro, Randolph County, North Carolina, and El Club Mexicano, Inc., is a corporation incorporated and existing under the laws of the State of North Carolina.
2. On August 11, 2014, several employees of El Club Mexicano, Inc., a corporation operating a food processing plant at 420 Waketa Drive, Asheboro, North Carolina, reported symptoms of headache, nausea, and vomiting. All employees evacuated the building. Randolph County Emergency Services transported several employees to Randolph Hospital. Others went to the hospital without assistance from first responders. Eighteen employees were treated in the hospital and four were kept in the hospital overnight.
3. The Asheboro Fire Department was called and responded to the possible chemical hazard at El Club Mexicano, Inc.'s, food processing plant. Firefighters ventilated the facility to acceptable oxygen, carbon monoxide and hydrogen sulfide level readings.
4. Randolph County Emergency Services notified state and federal agencies.
5. NCDA&CS Food and Drug Division placed an embargo on the shipment of food from the processing plant.

6. On August 12, 2014, Complainant's Field Inspector met with Jennifer Bridges, Inspector, NCDA&CS Food and Drug Division at El Club Mexicano's food processing plant. The plant reopened and employees returned to the building.

7. Complainant's Field Inspector also met with Inspector Fruitt of the Asheboro Fire Department at the facility. Complainant's Field Inspector then went to the Emergency Services Department with Inspector Fruit and met with Deputy Chief Hooker. Deputy Chief Hooker provided a copy of the incident report, MultiPro sensor readings and a list of the employees on site. Deputy Chief Hooker stated that he recognized the odor in the plant as one similar to "Phox Tox," a product used in silos of corn. He said that employees at El Club Mexicano's plant facility directed him to the dumpster where he found and removed Fumiteco 56 and TAT canisters. Fumiteco 56 containers were taken to the Randolph Hospital emergency room to aid in the treatment of the employees.

8. Deputy Chief Hooker also provided an Application Note from EnvironicsUSA concerning cross-sensitivity of the H₂S sensor to Phosphine, PH₃. Using this conversion he stated that when they arrived the PH₃ levels were at 18 parts per million.

9. Complainant's Field Inspector returned to El Club Mexicano's facility. Ms. Bridges provided a copy of a receipt dated August 7, 2014, from Family Dollar for seven three-packs of TAT Concentrated Foggers and one four-pack of Raid Concentrated Deep Reach Fogger.

10. Complainant's Field Inspector contacted John Allran, Environmental Toxicologist with the NCDA& CS Structural Pest Control and Pesticides Division. Mr. Allran contacted Mary Moore Cooper, the Director of Public Health for the County of Randolph. Ms. Cooper issued an Order of Abatement of an Imminent Hazard to El Club Mexicano's facility on August 12, 2014.

11. On August 20, 2014, Complainant's Field Inspector met with Renaldo Rivero, the receiving manager for El Club Mexicano. Mr. Rivero stated that on August 7, 2014, after everyone had left for the day, he and four employees placed pellets from four Fumiteco 56 canisters in cardboard boxes in the warehouse. A salesman had provided the four Fumiteco 56 canisters to the previous manager to try out. The canisters had been stored in a trailer outside the building. While on his way to Family Dollar to purchase foggers, Mr. Rivero received a phone call telling him that the smell from the Fumiteco 56 was really bad and might damage the food in the warehouse. All the cardboard boxes containing the Fumiteco 56 were placed in the dumpster. They then activated the twenty five foggers purchased from Family Dollar and left the warehouse.

12. Laboratory analysis of samples taken by Highlands Environmental Solutions, Inc., in the El Club Mexicano facility on August 20, 2014, revealed residual trace amounts of cypermethrin.

13. The Structural Pest Control Section's records reveal that neither Renaldo Rivero, Jerry Aleman, the manager for El Club Mexicano, nor Respondent Jorge Rivero is registered as a Non Commercial Certified Applicator.

14. Fumiteco 56 is manufactured in Mexico and is not a pesticide registered with the EPA. Similar EPA registered products are considered restricted use pesticides.

15. The registered labels for Raid Concentrated Deep Reach Fogger and TAT Concentrated Fogger contain the following language:

Do not use in commercial food/feed handling establishments, restaurants or other areas where food/feed is commercially prepared, processed or stored.

16. As a result of its investigation, Complainant alleges that Respondent, either by act or omission, violated the following provision(s) of the North Carolina Structural Pest Control Law and/or Regulations:

N.C. Gen. Stat. § 106-65.25. Phases of structural pest control; prohibited acts; license required; exceptions.

- (b) It shall be unlawful for any person to:

- (3) Use a restricted use pesticide in any phase of structural pest control, whether it be on the person's own property or on the property of another, unless the person:

- a. Qualifies as a certified applicator for that phase of structural pest control.

N.C. Gen. Stat. § 106-65.28. Revocation or suspension of license or identification card.

- (a) Any license or certified applicator's identification card or registered technician's identification card may be denied, revoked or suspended by a majority vote of the Committee for any one or more of the following causes:

- (8) Storing or disposing of containers or pesticides by means other than those prescribed on the label or adopted regulations.

N.C. Gen. Stat. § 106-65.33. Violation of Article, falsification of records, or misuse of registered pesticide a misdemeanor.

- (a) Any person who shall be adjudged to have violated any provision of this Article or who falsifies any records required to be kept by this Article or by the rules and regulations pursuant to this Article or who uses a registered pesticide in a manner inconsistent with its labeling shall be guilty of a Class 2 misdemeanor. In addition, if any person continues to violate or further violates any provision of this Article after written notice from the Committee, the court may determine that each day during which the violation continued or is repeated constitutes a separate violation subject to the foregoing penalties.

02 N.C. Admin. Code 34 .0405 FOLLOWING PESTICIDE LABEL

- (b) It shall be a violation of these Rules to use any pesticide in a manner inconsistent with its labeling.

17. Each of the above violations of the North Carolina Structural Pest Control Law and/or Regulations is subject to a civil penalty which may be assessed by the Committee as follows:

N.C. Gen. Stat. § 106-65.41 Civil penalties.

A civil penalty of not more than two thousand dollars (\$2,000) may be assessed by the Committee against any person for any one or more of the causes set forth in G.S. 106-65.28(a)(1) through (12) and G.S. 106-65.28(a)(14) and (15), or who violates or

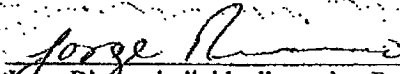
directly causes a violation of any provision of this Article or any rule adopted pursuant to this Article.

18. The parties are willing to accept a settlement of the dispute between them. This Agreement is made in order completely and finally to resolve the parties' claims and differences as stated above upon the following conditions:

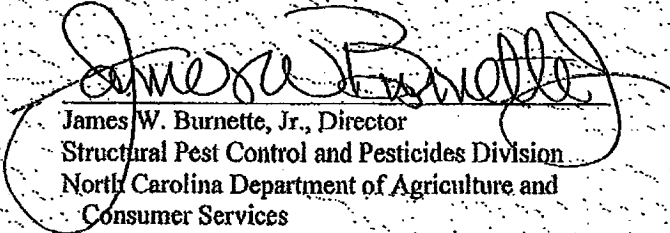
- (a) That Respondents shall pay the sum of ten thousand dollars (\$10,000.00) to the North Carolina Department of Agriculture and Consumer Services in two equal payments of five thousand dollars each. The first payment shall be due on February 1, 2015. The second payment shall be due on March 1, 2015.
- (b) That Respondents agree that if they fail to pay the agreed upon sum of ten thousand dollars (\$10,000.00) within thirty (30) days of the dates for each payment set forth in paragraph 18(a), this Agreement shall constitute a civil penalty assessment of the Committee of ten thousand dollars (\$10,000.00) for violations of the above-stated North Carolina Structural Pest Control Law and Regulations; failure to pay the civil penalty may subject Respondents to criminal and/or additional administrative charges;
- (c) That Respondents acknowledge their right to a hearing before the Committee of the civil penalty assessment in paragraph 18(b) and waives that right by consenting to the terms of this Agreement. Respondents further agree that the collection procedures outlined in N.C. Gen. Stat. § 106-65.41 may be instituted based on the civil penalty assessment contained in paragraph 18(b) of this Agreement;
- (d) That Respondents acknowledge that, upon acceptance and execution of this Agreement by the Committee, the Agreement shall become public record within the meaning of Chapter 132 of the North Carolina General Statutes and shall be subject to public inspection and dissemination pursuant to the provisions thereof;
- (e) That Respondents acknowledge that this Settlement Agreement constitutes full and fair written notice from the Committee, as provided in G.S. 106-65.33(a), that in the event that the Respondents commit any further violation of the Structural Pest Control Act, G. S. 106-65.22 et seq., then the Court in any prosecution of the Respondents for such violations may determine that each day during which Respondents' violation continued or is repeated constitutes a separate violation subject to punishment as a Class 2 misdemeanor.

WHEREFORE, the parties to this action hereby notify the Committee that it will be unnecessary to hold a hearing regarding this matter and respectfully request approval of this Settlement Agreement.

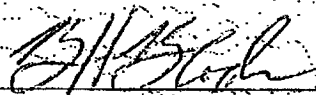
BY CONSENT:


Jorge Rivero, individually, and as President of El
Club Mexicano
El Club Mexicano
420 Waketa Drive
Asheboro, NC 27203

10-29-2014
Date


James W. Burnette, Jr., Director
Structural Pest Control and Pesticides Division
North Carolina Department of Agriculture and
Consumer Services
1090 Mail Service Center
Raleigh, NC 27699-1090

10/30/2014
Date


Barry H. Bloch
Assistant Attorney General
North Carolina Department of Justice
P.O. Box 629
Raleigh, NC 27602-0629

10/30/2014
Date

APPROVED AND ORDERED FILED,

this the 30 day of October, 2014.

NORTH CAROLINA STRUCTURAL PEST CONTROL COMMITTEE

BY: 

Chairman

ATTN Shelly W. Perry 15-02645

RELEASE FOR PROPERTY DAMAGE ONLY

I/WE Kristy Pedersen

For myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$480.00, I/We do hereby remise, release, and forever discharge The State of North Carolina, NC State Fairgrounds

and its, his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of DAMAGE TO PROPERTY (including loss of use thereof) arising out of an accident which occurred on or about the 3rd day of September, 2015, at or near Raleigh in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows:

\$480.00 To: Kristy Pedersen

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

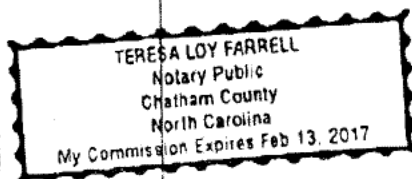
IN WITNESS WHEREOF I/We have signed this Release at X Pittsboro Chatham Co

In the State of North Carolina this 3 day of X Feb, 2016.

IN THE PRESENCE OF

X Teresa Loy Farrell Witness
X PO Box 7048 Address
X Pittsboro NC 27312 City/Zip

X Kristy Pedersen Claimant
X 9646 NC Hwy 902 Address
X Siler City, NC City/Zip 27344
X SS# [REDACTED]



AGREED TO:

Agency N. C. Dept. of Justice
By Shelly W. Perry

RELEASE FOR PROPERTY DAMAGE ONLY

I/We Linda McCoy for myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$467.87. I/We do hereby remise, release, and forever discharge The State of North Carolina, the NC Department of Agriculture and NC State Fairgrounds, and his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of damage to property arising out of an accident which occurred on or about the 14th day of October, 2016 near NC State Fairgrounds, Raleigh in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows :

\$ 467.87 To: Linda McCoy

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/WE have signed this Release at Cove City in the State of NC this 32 day of February, 2017.

IN THE PRESENCE OF

Nope Mauney Witness Name

1102 Upcreek Rd Witness Address

Cove City NC City/State/Zip
28523

Linda H. McCoy Print Name

Linda H. McCoy Signature

143 Brown Ave Address

Cove City NC 28523 City/State/Zip

[REDACTED] Social Security #

AGREED TO:

Agency: N.C. Department of Justice

By: Shelly W. Perry

RELEASE FOR PROPERTY DAMAGE ONLYI/WE Ellen Frank

For myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$20.00, I/We do hereby remise, release, and forever

discharge The State of North Carolina, NC Dept of Agriculture & Consumer Services and NC State Fair Division

and its, his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of DAMAGE TO PROPERTY (including loss of use thereof) arising out of an accident which occurred on or about the 22nd day of October, 2014, at or near Raleigh in the State of North Carolina. This release does not consider any verified hidden damages and or supplemental damages.

The above sum stated as a consideration of this Release is to be paid as follows:

\$20.00 To: Ellen Frank

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/~~we~~ have signed this Release at3rd Ellen FrankIn the State of North Carolina this 15th day of December, 2014.

IN THE PRESENCE OF

X Ellen Frank SignatureX Ellen Frank Print NameX 1429 Opal St AddressX Raleigh, NC 27615 City/Zip

XSS#

X Karen Rosler WitnessX 4108 Morning Blossom AddressX Raleigh NC 27616 City/Zip

Thank you for your
concern and attention
to this unfortunate
situation/occurrence

AGREED TO:

Agency

By

Dan Meyer

A G R E E M E N T

This agreement (the "Agreement") is made and entered into effective as of this 13th day of November 2015 by and between the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section (hereinafter referred to as either the "Department of Agriculture," the "Department" or the "Animal Welfare Section of the Veterinary Division of the Department of Agriculture"), and Michelle Starnes, Petitioner (hereinafter referred to as the "Petitioner or Ms. Starnes").

R E C I T A L S

WHEREAS, on February 18, 2015, the Department assessed the Petitioner a civil penalty in the amount of One Thousand, Five Hundred Dollars (\$1,500.00) as a result of the Department's discovery of evidence leading the Department to conclude that the Petitioner had in multiple instances violated Title 2 North Carolina Administrative Code 02 NCAC 52J .0418 and .0419; and

WHEREAS, on February 18, 2015, the Department issued the Petitioner a written Civil Penalty Assessment which, among other things, described in detail the evidence referred to in the preceding paragraph of this Agreement; and

WHEREAS, a true and correct copy of the February 18, 2015 written Civil Penalty Assessment is attached hereto as Exhibit I and is incorporated by reference in this Agreement; and

WHEREAS, the Petitioner disputes the February 18, 2015 written Civil Penalty Assessment; and

WHEREAS, the Petitioner filed a petition for a contested case hearing in the North Carolina Office of Administrative Hearings challenging the February 18, 2015 written Civil Penalty Assessment; and

WHEREAS, the Administrative Law Judge dismissed Petitioner's contested case petition in a June 25, 2015 Final Decision Order of Dismissal; and

WHEREAS, the Petitioner filed a July 23, 2015 petition for judicial review; Michelle Starnes, Petitioner, vs. Patricia Norris, DVM, Director Animal Welfare Division, North Carolina Department of Agriculture & Consumer Services, Respondent; 15 CVS 01854, in the Union County Superior Court in which she petitioned the Court to reverse or remand the Administrative Law Judge's decision; and

WHEREAS, the parties recognize that continued litigation over the February 18, 2015 written Civil Penalty Assessment would be expensive and time-consuming; and

WHEREAS, the Petitioner and the Department desire to fully and finally compromise and settle this and all other disputes and controversies between them involving the Department's February 18, 2015 assessment of a civil penalty against the Petitioner; and

WHEREAS, the Petitioner and the Department desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of continued litigation.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, the Department of Agriculture and the Petitioner agree as follows:

1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by this reference as if fully set forth herein.

2. By no later than November 13, 2015, the Petitioner shall file a Dismissal with Prejudice of the case entitled, *Michelle Starnes, Petitioner, vs. Patricia Norris, DVM, Director Animal Welfare Division, North Carolina Department of Agriculture & Consumer Services, Respondent*; 15 CVS 01854, in the Office of the Union County, North Carolina, Clerk of Superior Court. On the same date, the Petitioner shall serve a file-stamped copy of said Dismissal With Prejudice on counsel for the Department.

3. Upon its counsel's receipt from the Petitioner of her Dismissal With Prejudice of *Michelle Starnes, Petitioner vs. Patricia Norris, DVM, Director Animal Welfare Division, North Carolina Department of Agriculture & Consumer Services, Respondent*; 15 CVS 01854, as provided in paragraph 2 of this Agreement above, and upon the Petitioner's full compliance with the other terms of this Agreement, the Department shall stay its enforcement of the civil penalty assessment (in the amount of \$1,500.00); provided that, upon any future violation by the Petitioner of the Animal Welfare Act, N.C. Gen. Stat. §19A-20, *et seq.*, the full amount of the civil penalty assessment (in the amount of \$1,500.00) shall be reinstated.

4. Notwithstanding the Petitioner's signature below, the Petitioner denies any and all liability relating to the written Civil Penalty Assessment and denies the allegations and other statements contained in the written Civil Penalty Assessment.

5. By their respective signatures below, the Petitioner and the Respondent each acknowledge that they have entered into this Agreement voluntarily and that they have done so after having ample opportunity to review this Agreement with any individual, advisor and counsel they desired.

6. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

7. The parties agree to act in good faith in the implementation of this Agreement.

8. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referred to in this Agreement.

9. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

10. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

11. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor of or against any party based upon which party drafted or participated in drafting this Agreement.

12. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

13. This Agreement shall be binding in perpetuity upon and shall inure to the benefit of the parties, their agents, officers, employees, successors, assigns, heirs, executors and administrators.

Agreement continues on the following pages.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and signed as of the day and year indicated by their signatures below.

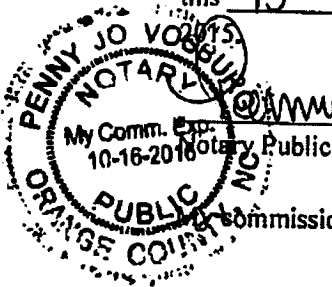
THE NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
VETERINARY DIVISION, ANIMAL WELFARE
SECTION

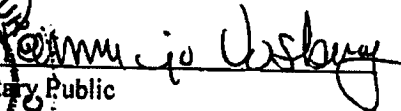
By: 

Patricia Norris

Director, Animal Welfare Section, North Carolina
Department of Agriculture and Consumer Services

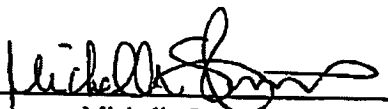
Subscribed and sworn to before me
this 13th day of November




Notary Public

My commission expires: Oct. 16, 2016

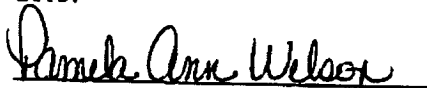
MICHELLE STARNES, PETITIONER

By: 

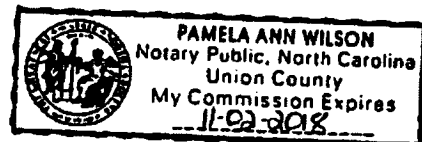
Michelle Starnes

The Petitioner

Subscribed and sworn to before me
this 6th day of November
2015.


Notary Public

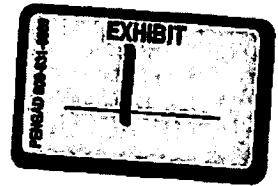
My commission expires: 11-02-2018



11-02-2018

Exhibit 1

**(February 18, 2015 Written Notice of Civil Penalty
Assessment)**



STATE OF NORTH CAROLINA
COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
VETERINARY DIVISION

IN THE MATTER OF
MICHELLE STARNES

) NOTICE OF VIOLATIONS,
) ASSESSMENT OF CIVIL
) PENALTY
)
) For Violations Of:
) 2 N.C. Administrative Code 52J
) .0418 and .0419

Acting pursuant to N.C. Gen. Stat. §§ 19A-24 and -40, Dr. Patricia Norris, Director of the Animal Welfare Section, Veterinary Division, North Carolina Department of Agriculture and Consumer Services (NCDA&CS) makes the following:

FINDINGS OF FACT

1. At all times pertinent to this matter Michelle Starnes ("Starnes") was a certified euthanasia technician ("CET") registered with the Animal Welfare Section, Veterinary Division, NCDA&CS ("AWS"), and on record as being employed by Union County Animal Services pursuant to N.C. Gen. Stat. § 19A-24(b)(8).
2. On December 3, 2014, AWS Inspector Jay Blatche ("Ins. Blatche") conducted a euthanasia inspection at the animal shelter operated by Humane Society of Concord and Greater Cabarrus County ("HSC&GCC").
3. In the course of this inspection Ins. Blatche was informed that:
 - a. Before June 30, 2014, Dr. A. M. McClone, DVM, had performed all euthanasias at HSC&GCC;
 - b. From June 30, 2014, to July 31, 2014, HSC&GCC contracted with a local veterinarian who provided a veterinary technician, Mindy Joyner, an employee of Cabarrus Animal Hospital, to euthanize animals in the facility; and
 - c. From August 21, 2014, to December 3, 2014 (the date of the inspection), animals in the facility were euthanized by "several employees" who were CETs, who were from Union County, who were not under contract with HSC&GCC.
4. On December 22, 2014, Ins. Blatche and Outreach Coordinator Joe Blomquist ("OC Blomquist") visited HSC&GCC to ask additional questions regarding the names of the persons who are euthanizing animals at that facility.
5. HSC&GCC's representative, Ms. Judy Simms, told Ins. Blatche and OC Blomquist that all animal euthanasia at the facility is done by Cabarrus County in a room set aside for that purpose.
6. Ms. Simms stated that Starnes and Chris Royal were euthanizing animals for Cabarrus County but she did not know who hired them, who paid them or what arrangement they had with Cabarrus County.

7. On the same day Ins. Blatche and OC Blomquist met with Cabarrus County's animal control manager, LT David Taylor, who told them that:
 - a. Starnes and Chris Royal euthanize the animals at HSC&GCC's facility;
 - b. Starnes and Chris Royal are not employees of HSC&GCC or of Cabarrus County Animal Control;
 - c. There is no written agreement between Cabarrus County and Union County regarding Starnes euthanizing animals at HSC&GCC;
 - d. There is no written agreement between "Dr. Brent" and Cabarrus County Animal Control regarding Chris Royal euthanizing animals at HSC&GCC;
 - e. Starnes and Chris Royal euthanize animals at HSC&GCC in the morning before the facility opens;
 - f. Union County gave permission to Starnes to euthanize animals at HSC&GCC;
 - g. He did not know whether Dr. Brent gave permission to Chris Royal to euthanize animals at HSC&GCC;
 - h. No one in Cabarrus County Animal Control had informed AWS that Starnes or Chris Royal were euthanizing animals at HSC&GCC;
 - i. No veterinarian was present when Starnes and Chris Royal euthanized animals at HSC&GCC;
 - j. He believed that both Starnes and Chris Royal were certified as euthanasia technicians by AWS; and
 - k. Starnes and Chris Royal used Cabarrus County Animal Control's euthanasia drugs and LT Taylor or one of his officers was present to provide the drugs and hold the animals, when necessary, while animals were being euthanized.
8. LT Taylor stated that Starnes and Chris Royal were employed and paid by Dr. Brent E. Glenn, DVM ("Dr. Glenn"), to euthanize animals at HSC&GCC for Cabarrus County.
9. Starnes told Ins. Blatche that she began euthanizing animals at Cabarrus County Animal Shelter ("CCAS") in August 2014, using injected euthanasia drugs provided under Cabarrus County's DEA license.
10. Starnes told Ins. Blatche that she euthanized approximately 20 animals each week for Cabarrus County Animal Control at HSC&GCC.
11. Starnes told Ins. Blatche that she was paid to euthanize animals for Cabarrus County Animal Control at HSC&GCC by Dr. Glenn.
12. Starnes stated that Dr. Glenn does not withhold taxes from her pay but would provide her with a W-9 form at the end of the year.
13. Starnes admitted that her certification did not authorize her to euthanize animals for Cabarrus County Animal Control at HSC&GCC.
14. Starnes stated that she did not represent to Cabarrus County Animal Control that she was certified to euthanize animals at HSC&GCC; rather, she did so as Dr. Glenn's employee.
15. Starnes stated that while she was euthanizing animals for Cabarrus County Animal Control at HSC&GCC, she saw Chris Royal also euthanizing animals for Cabarrus County Animal Control at HSC&GCC.
16. Starnes stated that Chris Royal was also paid by Dr. Glenn to euthanize animals for Cabarrus

County Animal Control at HSC&GCC.

17. Dr. Patricia Norris, Director of Animal Welfare Section, NCDA&CS, spoke by telephone with Dr. Glenn on February 2, 2015.
18. Dr. Glenn told Dr. Norris that he had never been to the animal shelter facility operated by Cabarrus County.
19. Dr. Glenn stated that he believes that Cabarrus County Animal Control asked Starnes to euthanize animals in their facility.
20. Dr. Glenn stated that Starnes came to him to ask him to "run the money through him."
21. Dr. Glenn said that Starnes told him that she and Chris Royal were certified to perform euthanasia and could euthanize at Cabarrus County Animal Shelter.
22. Dr. Glenn stated that he made arrangements to bill for and accept payments from Cabarrus County, keeping ten percent of payments received and paying the rest of the money to Starnes.
23. Dr. Glenn stated that Cabarrus County provided the euthanasia drugs to Starnes and Chris Royal
24. Dr. Glenn stated that Starnes and Chris Royal euthanized the animals and completed the records and paperwork.
25. At no time has CCAS ever reported to AWS that it employs Starnes as a CET in its facility.
26. Starnes knew or should have known that, from August 21, 2014, to December 3, 2014, Chris Royal was not certified by AWS to euthanize animals in North Carolina.
27. Chris Royal's certification as a euthanasia technician in North Carolina was cancelled when she left employment at Iredell County Animal Shelter on April 18, 2013.

As a result of this investigation, NCDA&CS, Veterinary Division, AWS alleges that Starnes, either by act or omission, violated the following provisions of the N.C. Administrative Codes: North Carolina Administrative Code 52J .0418(6) and .0419(1), (4) and (7). See Appendix for cited NC Administrative Codes.

§19A-40. Civil Penalties.

The Director may assess a civil penalty of not more than five thousand dollars (\$5,000) against any person who violates a provision of this Article or any rule promulgated thereunder. In determining the amount of the penalty, the Director shall consider the degree and extent of harm caused by the violation. The clear proceeds of civil penalties assessed pursuant to this section shall be remitted to the Civil Penalty and Forfeiture Fund in accordance with G.S. 115C-457.2. (1995, c. 516, s.6; 1998-215, s.3.)

III. DECISION

As required by N.C. Gen. Stat. § 19A-40 in determining the amount of the civil penalty, I have considered the degree and extent of harm caused by the violations listed above.

Accordingly, Starnes is assessed a civil penalty of: \$1,500.00 for violating Title 2 North Carolina Administrative Code 02 NCAC 52J .0418 and .0419.

\$1,500.00 TOTAL AMOUNT ASSESSED

2/18/2015
Date

Patricia Norris
Dr. Patricia Norris
Director, Animal Welfare Section
North Carolina Department of
Agriculture & Consumer Services

COUNTY OF CHATHAM

N.C. DEPARTMENT OF AGRICULTURE
AND CONSUMER SERVICES,
MEAT & POULTRY INSPECTION
DIVISION

Complainant

V.

MR. MOHAMMED SBAITI

Respondent.

SETTLEMENT AGREEMENT

RECITALS

Mr. Mohammed Sbaiti (“Mr. Sbaiti” or the “Respondent”) and the North Carolina Department of Agriculture and Consumer Services (the “Complainant”) desire to fully and finally settle this and all other disputes and controversies surrounding the Defendant’s operation of an unlicensed slaughter facility and failure to properly dispose of animal remains, and desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

Whereas:

a) On October 4, 2014, NCDA & CS, MPID Food Compliance Officers Daniel E. Moody Jr., Willis Craig Philyaw, Marvin Lackman and Phillip Renshaw (hereinafter, CO Moody, CO Philyaw, CO Lackman and CO CO Renshaw, respectively), arrived at the property of Mr. Mohammed Sbaiti, 1169 Joe Womble Road, Pittsboro, NC (hereinafter, the Sbaiti's farm), and executed a search warrant of the property on behalf of the North Carolina Department of Agriculture and Consumer Services.

b) At the Sbaiti's farm on October 4, 2014, CO Moody, CO Philyaw, CO Lackman and CO Renshaw observed, photographed and videotaped a non-inspected slaughter/processing

facility/location and services being provided to the general public and in full operation. All of the following findings refer to their observations and findings at the Sbaiti's farm on said date.

c) On October 4, 2014 CO Moody, CO Philyaw, CO Lackman and CO Renshaw observed approximately 30 males, females and children in a field area on the Sbaiti's farm.

d) When CO Lackman attempted to question said males, a spokesman for the group stated that the group was at Mr. Sbaiti's farm to purchase a lamb and/or goat for a price of one hundred fifty dollars (\$150.00) per animal and an additional fee of twenty five dollars (\$25.00) for the slaughter and/or processing of each animal.

e) CO Moody, CO Philyaw, CO Lackman and CO Renshaw also observed six (6) slaughtered lambs and/or goats that were hanging from a wooden outside structure and in various phases of being slaughtered and processed.

f) CO Moody, CO Philyaw, CO Lackman and CO Renshaw also observed approximately twenty-five (25) live lambs and/or goats that were waiting to be slaughtered and processed.

g) CO Moody, CO Philyaw, CO Lackman and CO Renshaw observed numerous flies on the carcasses that were being slaughtered and processed. There was no means observed to sterilize or sanitize the knives and other equipment used to slaughter and/or process the animals.

h) CO Moody, CO Philyaw, CO Lackman and CO Renshaw observed two males cutting up a lamb carcass on a large dirty wooden stump. The two males placed the cut-up pieces of the lamb carcass in a plastic ice cooler.

i) CO Moody, CO Philyaw, CO Lackman and CO Renshaw also observed several sheep heads and sheep hides on the ground, in a five gallon bucket and also in a wheel barrow internal organs and animal heads were observed. An excessive amount of blood, ponding water, manure/fecal material was on the ground and around the slaughter area from the day(s) slaughter activities.

j) CO Moody, CO Philyaw, CO Lackman and CO Renshaw found no means or devices to render the animals insensible to pain prior to the slashing of their throats.

k) The observations and conditions described above constitute numerous unsanitary conditions and practices which led to the direct adulteration of the slaughtered animals. These unsanitary conditions and practices included:

1. animals being processed (washed, cut-up, etc.) directly on a dirty wooden stump;
2. slaughter/processing utensils (knives, axe, hatchet, etc.) showed no signs of routine cleaning or any means of sanitizing the utensils;
3. carcass offal, bones, hooves, leg pieces, hair, fecal material and several animal heads were lying on the ground, in five gallon buckets and in a wheel barrel from that day's slaughter or processing activities;
4. blood, ponding water and fecal material was observed on the ground in the slaughter/processing area from that day's slaughter and previous day(s) slaughter activities;
5. no evidence of any hot water or any other means to sanitize equipment or tools;
and
6. numerous flies were on carcasses due to the open air conditions.

l) On October 4, 2014, CO Lackman informed Mr. Mohammed Sbaiti to cease and desist from the slaughtering/processing of animals at his non-inspected slaughter/processing location.

m) The slaughtering/processing facility/location owned and operated by Mr. Mohammed Sbaiti is not a NCDA or USDA inspected facility.

Whereas Complainant has issued to respondent a written notice of civil penalty assessment for violation of G.S. §§106-549.17 and 106-49.23 by operating/providing a facility and services for the slaughter of animals by/for the general public without benefit of NCDA or USDA inspection. Complainant may be assessed a civil penalty of up to five thousand

(\$5,000.00) dollars per violation under G.S. §106-549.35(c).

Whereas Respondent received written notice of said civil penalty which is attached hereto and hereby incorporated herein by reference as Appendix A;

Whereas, the sum of the civil penalty assessment was \$6,000.00;

Whereas Defendant failed to pay said civil penalties and has not petitioned for a contested case hearing before the North Carolina Office of Administrative Hearings to contest the same;

WHEREAS the parties desire to resolve these matters without further litigation.

NOW THEREFORE, the parties agree as follows:

- 1) Whereas, within ten days (10) of the date both parties have signed this formal written settlement agreement, Respondent shall remove or cause to be removed all equipment and other items (hereinafter, "equipment") that can be used for the slaughter and/or processing of animals for human consumption, except for the following items:

a) _____;

b) _____;

A.D. None (initial)

from Sbaiti's farm, 1169 Joe Womble Road, Pittsboro, NC, and all such items will be disposed of in a lawful fashion by sale or disposal in a landfill or other appropriate facility within forty-eight hours after removal. Removal of the equipment from Sbaiti's farm shall take place in the presence of the Complainant's designated representative. If the equipment is sold, Respondent shall provide the Complainant with the name and address of the person or company purchasing it within twenty-four hours of delivering the equipment to the purchaser. The parties further understand and agree that Respondent may use the items of equipment mentioned above only for the slaughtering or processing of animals of his own raising, and the preparation by

him of the carcasses, parts thereof, meat and meat food products of such animals exclusively for use by him and members of his household and his nonpaying guests and employees, as provided in N.C. Gen. Stat. § 106-549.27(a)(1);

2) Respondent hereby agrees to pay the sum of three thousand dollars (\$3,000.00) to the Plaintiff as consideration for this settlement agreement. The parties agree and acknowledge that the Plaintiff is required by law to turn said payment over to the Department of Public Instruction. Defendant shall pay the Plaintiff according to the following schedule:

- a. Defendant shall pay the Plaintiff the sum of five hundred dollars (\$500.00) on or before April 20, 2015;
- b. Defendant shall pay the remaining balance of two thousand five hundred dollars (\$2,500.00) in twenty-five equal monthly installments of one hundred dollars (\$100.00) due on the first day of each month, sent to:

**NC Department of Agriculture & Consumer Services
ATTN: Alan Wade, State Director
Meat and Poultry Inspection Division
1001 Mail Service Center
Raleigh, N.C. 27699-1001**

beginning on that date of the month following the month in which all of the parties to this Settlement Agreement have executed this Settlement Agreement. A monthly payment is late and the Defendant is in breach of this Settlement Agreement if payment is received after 5:00 p.m. of the date due. Receipt of payment in an envelope postmarked or otherwise dated by commercial courier or the U.S. Postal Service on or before the date due, which is received after the date due, shall be deemed to be on time;

- 3) As further consideration Respondent shall sign Appendix B, a Confession of Judgment in favor of the Complainant for the sum of three thousand dollars (\$3,000.00). The Complainant shall not file said Confession of Judgment with the Court unless the Respondent violates this settlement agreement by:
- a. Failing to pay the \$3,000.00 within the time and according to the terms provided in this Settlement Agreement;
 - b. Failing to remove the equipment from Sbaiti's Farm, 1169 Joe Womble Road, Pittsboro, NC, by the deadline stated herein, unless Complainant finds that there is a good reason to grant the Respondent additional time in which to do so;
 - c. Returning the equipment or other items to Sbaiti's Farm, 1169 Joe Womble Road, Pittsboro, NC, that, in the opinion of the Plaintiff's compliance officers, enables the Respondent to conduct unlicensed, uninspected slaughter there again; or
 - d. Committing another violation of the laws and/or rules enforced by the Meat and Poultry Inspection Division, specifically but not limited to Articles 49B and 49C of the North Carolina Mandatory Meat and Poultry Inspection Law, there regulations enacted thereunder, or G.S. § 106-403 and the regulations enacted thereunder.
- 4) Complainant may deem Respondent to be in breach of this Settlement Agreement upon finding:
- e. Respondent has failed to make timely payment; if Respondent finds he lacks sufficient funds to make a monthly payment, he shall notify the Complainant before payment is due and request that the payment be rolled over to the next month.

- f. The following month Respondent shall bring his payments up to date (paying double the usual monthly payment) unless he has received permission from the Complainant to pay less than double the monthly payment, \$200.00.
 - g. Failure to make payment in full each month without prior notification to the Respondent shall constitute a material breach of this Settlement Agreement;
 - h. If the Complainant files the Confession of Judgment for such breach or any other breach of this Settlement Agreement, it shall not excuse Respondent from his continuing obligation to make monthly payments.
 - i. When it files the Confession of Judgment, the judgment shall reflect and give credit for payments made up to date of filing of the Confession of Judgment against the amount of \$6,000.00.
 - j. There is no interest charged on the unpaid balance and no penalty for early payment.
- 5) Complainant hereby reserves the right to forego filing Appendix B, the Confession of Judgment, against the Respondent if it finds a good reason to refrain from doing so. However, if Plaintiff in the sound exercise of its discretion refrains from filing Appendix B, this is not a waiver of its right to do so later;
- 6) Respondent agrees not to offer any land that he owns, rents, or controls, together or separately, as a place to slaughter and/or process animals for food, except as provided by law for animals of his own raising, to be fed to his family, employees or non-paying guests;
- 7) Respondent does hereby promise and grant to the Plaintiff the right to enter the property located at Sbaiti's Farm and all other properties that he currently owns,

either jointly with others or individually, leases or has use of. Respondent shall, when he executes of this Settlement Agreement, provide to the Complainant a list of all the properties he currently owns, leases or has use of, both jointly with others or individually, including the properties' street address or GPS coordinates. Respondent shall provide to the Complainant a list of all said properties, Appendix C, which is attached hereto and incorporated herein by reference. Complainant's right to enter and to inspect those properties and their buildings shall be without notice, at any time (24hours per day/7 days per week). Respondent further promises and agrees that, upon purchasing, leasing or otherwise receiving the use and/or control of any other parcels of land in the State of North Carolina after his execution of this agreement, he shall:

- a.) notify the Complainant within forty-eight hours of receiving access to or control of said parcels of land;
 - b) grant Complainant the same right of entry and inspection thereto; and
 - c) provide the Complainant with the newly acquired land parcel's address or GPS coordinates.
- 8) Complainant hereby agrees that the right to conduct such inspections described in paragraph 7 shall not include the right to enter and inspect any building on any of the properties mentioned herein that are used solely as human habitation; and
- 9) Respondent further agrees not to commit any other violations of the North Carolina Meat and Poultry Inspection Law, articles 49B, 49C and 49H, or of G.S. § 106-403 or the regulations enacted thereunder.

In return, the Complainant hereby agrees as follows:

- 1) Complainant accepts three thousand dollars (\$3,000.00) in compromise of its civil penalty assessment in order to settle this matter;

- 2) Complainant agrees not to file Respondent's Confession of Judgment, Appendix B, unless Respondent violates this Settlement Agreement;
- 3) Complainant hereby agrees that, if Respondent complies with the Settlement Agreement completely and commits no violations of the North Carolina Meat and Poultry Inspection Law, its regulations or of G.S. § 106-403 and 02 NCAC 52C .0102 for from the date the Settlement Agreement is signed by both parties, until Respondent has paid the entire sum of \$3,000.00 to Complainant as provided above, the Complainant will return the original Confession of Judgment to the Respondent for cancellation unless Appendix B has been filed with the Clerk of Court of the county in which Respondent resides.

The parties mutually agree to act in good faith in the implementation of this agreement.

The parties agree to bear their own attorney's fees. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates

indicated below:

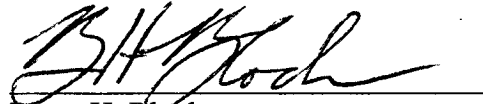
DEFENDANT



MOHAMMED SBAITI

Date: 4/20/15


ATTORNEY FOR COMPLAINANT



Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: 4/21/2015

FOR COMPLAINANT



ALAN WADE
Director, Meat and Poultry Inspection Division
North Carolina Department of Agriculture & Consumers Services

Date: April 20, 2015

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

IN THE OFFICE OF
ADMINISTRATIVE HEARINGS
14 DAG 07101

NICHOLAS FROST D/B/A
TOP DOG KENNEL

Petitioner,

v.

N.C. DEPARTMENT OF AGRICULTURE
AND CONSUMER SERVICES
VETERINARY DIVISION

Respondent.

SETTLEMENT AGREEMENT

RECITALS

Nicholas Frost (the "Petitioner") and the North Carolina Department of Agriculture and Consumer Services (the "Respondent") desire to fully and finally settle this and all other disputes and controversies surrounding the Petitioner's operation of a boarding kennel, and desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

WHEREAS, at all times pertinent to this matter the Petitioner operated a boarding kennel, Top Dog Kennel ("TDK" or the "kennel") licensed pursuant to N.C. Gen. Stat. § 19A-28, license number 10,386.

WHEREAS, on July 16, 2014, Mrs. James Burns called TDK to arrange for the family dog, a Chihuahua, "Dulcey," to be boarded there from July 18 to July 21, 2014.

WHEREAS, Mr. Burns dropped Dulcey off at TDK at about 3:30 p.m., Friday, July 16,

2014, at TDK and informed the receptionist that he would pick up Dulcey on the following Monday.

WHEREAS, Mr. Burns declined the extra service of having Dulcey walked.

WHEREAS, On Monday, July 21, 2014, at about 4:31 p.m., Mr. Burns was driving from Asheville to TDK to pick up Dulcey.

WHEREAS, Mr. Burns received a telephone call at 4:31 p.m. from the Petitioner, who said that he had Dulcey in his office at TDK. There was also a Kerry Blue Terrier ("Terrier") in the office in a crate, to be groomed.

WHEREAS, the Petitioner said that he left the office. When he returned he found that the Terrier had "broken out of his crate" and killed Dulcey.

WHEREAS, Mr. Burns ended the call and then called the Petitioner back at 4:36 p.m., requesting that the Petitioner explain what happened again. The Petitioner repeated what he had told Mr. Burns. When Mr. Burns asked the Petitioner whether he still had Dulcey's body or had he taken her to a veterinarian, the Petitioner replied that Dulcey was dead when he found her. Mr. Burns informed the Petitioner that he was coming to pick up Dulcey and to please wrap up the body. Mr. Burns told the Petitioner that this was the second time that one of his pets has been attacked while at TDK.

WHEREAS, Mr. Burns and his son arrived at TDK at 6:00 p.m. Mr. Burns asked the Petitioner to explain again what happened to Dulcey because he thought a terrier was a small dog. The Petitioner said that the Terrier was "about hip high."

WHEREAS, the Petitioner took Mr. Burns to the TDK's grooming area adjacent to the front lobby and office. The Petitioner showed Mr. Burns the dog crate the Terrier escaped from

when it killed Dulcey. Mr. Burns saw no damage to the crate. The Petitioner said he "didn't know what happened, (he) didn't know if (he) hadn't latched the door properly or..."

WHEREAS, Respondent's Inspector Jay Blatche arrived at TDK on July 24, 2014, and met with employee Michael Boggs.

WHEREAS, Inspector Blatche reviewed the Terrier's and Dulcey's records and found Dulcey's rabies vaccination had expired on December 13, 2013.

WHEREAS, Inspector Blatche called the Petitioner by telephone. The Petitioner told Mr. Blatche that he left Dulcey in the office and left the Terrier, Layla, in the crate in the grooming area next to the office, when he left the office. When he returned to the office he found Dulcey dead and Layla out of the crate. This occurred at about 2:30 p.m.

WHEREAS, Inspector Blatche asked the Petitioner if he had informed Layla's owner that Layla had killed another dog. The Petitioner replied that he had done so.

WHEREAS Inspector Blatche asked the Petitioner if he had informed Layla's owner that the dog Layla killed was not current on its rabies vaccination. The Petitioner answered that he did not know Dulcey's rabies vaccination was not current.

WHEREAS, the Petitioner said that TDK does not use a written contract or agreement for dog owners to indicate that their dogs may come into contact with other animals. It is TDK's policy to ask owners whether they want their animals to play or be walked with other animals.

WHEREAS Inspector Blatche informed the Petitioner:

- i. that all animals at TDK must be secure when unsupervised;
- ii. that all animals at TDK must be current on their rabies vaccination;
- iii. that TDK's facility must have a written contract or agreement that allows

animals to come in contact with other animals; and

- iv. that all animal bites must be reported to the local animal control immediately.

WHEREAS, the Respondent imposed a civil penalty upon the Petitioner for Petitioner's failure to comply with minimum state standards for the maintenance and operation of a licensed boarding kennel.

WHEREAS, the Petitioner has filed with the North Carolina Office of Administrative Hearings a Petition for a Contested Case Hearing.

WHEREAS, the parties desire to resolve this matter without further litigation.

NOW THEREFORE, the parties agree as follows:

1. Petitioner agrees that, when Respondent signs this Agreement, Petitioner shall authorize the Respondent to file on his behalf a voluntary dismissal of his Petition for a Contested Case Hearing, with Prejudice, with the N.C. Office of Administrative Hearings.
2. Petitioner agrees and the Respondent agrees to accept from Petitioner, the sum of six hundred dollars (\$600.00), to be paid in three equal monthly payments of \$200.00, with the first payment due on December 1, 2014. Respondent further agrees that said payments shall be deemed made on time if Petitioner mails them, US Postal Service First Class Mail, postage prepaid, postmarked no later than 5:00 o'clock p.m. on the date due.
3. The Petitioner agrees to execute and to provide to the Respondent the attached Confession of Judgment which the parties agree shall not be filed with the Clerk of Court in Buncombe County unless Respondent's duly authorized officers, agents or employees find that Petitioner has:

- a) violated a material provision of this Agreement; or
- b) committed a violation of Chapter 19A of the North Carolina General Statutes or subchapter 52J of Title II of the North Carolina Administrative Code.

4. The persons signing this Agreement represent that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties, the parties represent to each other that they have full power and all requisite authority to execute and perform this Agreement.

5. The parties agree to act in good faith in the implementation of this agreement.

6. The parties agree to bear their own attorneys fees and costs.

7. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters. Terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

8. The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

9. North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates indicated below:

N. C. Frost
Nicholas Frost
D/b/a Top Dog Kennel

Date: 11-28-14.

FOR RESPONDENT:

B. H. Bloch
Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice
ATTORNEY FOR RESPONDENT

Date: 12/2/2014

P. Norris
Dr. Patricia Norris, DVM
Director, Animal Welfare Section
North Carolina Department of Agriculture & Consumers Services

Date: 12/2/2014

NORTH CAROLINA INDUSTRIAL COMMISSION
RALEIGH, NORTH CAROLINA

RELEASE OF TORT CLAIM UNDER GENERAL STATUTE 143-291 *et seq.*

AG File No. _____ I.C. File No. TA-

KNOW ALL MEN BY THESE PRESENTS, That I, Nicole Schlack for the sole consideration of \$290.47 to be paid by The State of North Carolina, the payment whereof being made under the provision of General Statutes 143-291 *et seq.*, do hereby release and discharged and by these presents to for myself, ourselves, my, our heirs, executors, administrators and assigns release and forever discharge The State of North Carolina, the NC State Fairgrounds, and all other persons and entities, including but not limited to, all employees and agents of the State of North Carolina and the NC State Fairgrounds, its officers, employees, servants, and agents, individually and officially, of and from any and all personal property, personal injury, wrongful death and subrogation claims, demands, damages, actions, cause of action of whatever kind or nature, on account of an accident which occurred on or about the 24th day of January, 2016 in Raleigh, NC resulting in prescription expenses.

I also acknowledge and agree that all medical and/or chiropractic bills of any kind or nature whatsoever incurred by me as a result of injuries that I sustained in said accident have been paid or will be paid out of these proceeds and I agree to indemnify and hold harmless the parties released hereby from any claims by any person or entity seeking the recovery of unpaid bills for medical and/or chiropractic treatment provided to me. I further acknowledge that no lien by any third party exists on the proceeds of this settlement and I agree to indemnify and hold harmless the parties being released from any claims by any person or entity seeking the recovery of or enforcement of such liens.

I further hereby agree to indemnify and save harmless the released parties of and from any and all claims of any sort from any party claiming to be subrogated or to have any other type of legal or equitable claim to the proceeds or any part of the proceeds paid in exchange for this release. This indemnification extends to and includes indemnification from all costs and attorney fees that might be incurred as a result of such claim.

I, understand that this release is made as compromise to avoid expense and to terminate all controversy and/or claims for injured or damages of whatever nature, known or unknown, including future developments thereof, in promise of a disputed claim, and it is therefore specifically agreed that this release shall be a complete bar to all claims or suit for injuries or damages of whatsoever nature resulting or to result from said accident.

IN WITNESS WHEREOF I, We, have hereunto set my, our, hand(s), this 14 day of July, 2016.

Investigator

Shirley W. Perry
Name

Claimant

Nicole Schlack
Name (Print)

Nicole Schlack
Name (Sign)

9816 Bitter Melon Dr
Address

Angier NC 27501
Address

[REDACTED]
Social Security Number

Witness

Gary Schlack
Name

Gary Schlack
Address

9816 B. Her Melon Dr
Address

Angier NC 27501
Address

STATE OF NORTH CAROLINA
COUNTY OF JOHNSTON

IN THE OFFICE OF
ADMINISTRATIVE HEARINGS
17 DAG 07029

ORMOND'S OIL & GAS,

Petitioner,

v.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, STANDARDS DIVISION,

Respondent.

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. 150B-22 and 150B-41(c), which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, this agreement (the "Agreement") is made and entered into by and between Respondent, the North Carolina Department of Agriculture and Consumer Services, Standards Division (hereinafter the "NCDA&CS"), and Petitioner, Ormond's Oil & Gas (hereinafter "Petitioner"), effective as of the date reflected by the Notary Public for the signature of Stephen Benjamin, Director of the Standards Division, appearing on page 4 of this Agreement.

R E C I T A L S

WHEREAS, Jay Worley is the owner and operator of Ormond's Oil & Gas located at 9535 US Hwy 70E, Princeton, Johnston County, North Carolina 27569;

WHEREAS, on October 3, 2017, NCDA&CS issued Petitioner a civil penalty in the amount of Two Hundred Dollars (\$200.00) for alleged violations of North Carolina LP-Gas Laws and rules;

WHEREAS, Petitioner denies the alleged violations;

WHEREAS, Petitioner timely appealed the October 3, 2017 civil penalty by filing a Petition for a Contested Case Hearing with the North Carolina Office of Administrative Hearings (17 DAG 07029);

WHEREAS, NCDA&CS and Petitioner desire to fully and finally compromise and settle all disputes and controversies between them involving or arising out the October 3, 2017 civil penalty;

WHEREAS, NCDA&CS and Petitioner desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of litigation.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, NCDA&CS and Petitioner agree as follows:

1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by reference as if fully set forth herein.

2. By his signature below, Petitioner agrees to pay the sum of Fifty Dollars (\$50.00) to NCDA&CS within thirty (30) days of the effective date of this Agreement.

a. Petitioner's payments will be mailed addressed as follows:

Standards Division
North Carolina Department of Agriculture and Consumer Services
Attention: Stephen Benjamin, Director Standards Division
1050 Mail Service Center
Raleigh, North Carolina 27699-1050

b. Petitioner's payment shall be considered to have been paid on time if Petitioner sends the payment by U.S. Postal Service First Class Mail, or other commercial carrier, prepaid, and the envelope is postmarked on or before the date when the payment is due.

3. By his signature below, Petitioner agrees that, within sixty (60) days of the effective date of this agreement, Petitioner's employee Lemuel Banagas will complete training regarding operation of a LP-Gas transport vehicle and the proper use of wheel stops which is offered and approved by the North Carolina Propane Gas Association. Petitioner further agrees that he will notify NCDA&CS in writing within five (5) days of the training having been completed.

4. By his signature below, Petitioner further agrees to voluntarily dismiss his appeal of the October 3, 2017 civil penalty (17 DAG 07029) with prejudice within thirty (30) days of the effective date of this Agreement.

5. An action to recover any amount under this Agreement shall not relieve any party from any other penalty permitted by law.

6. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referenced in this Agreement.

7. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

8. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

9. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed and signed by all signatories hereto.

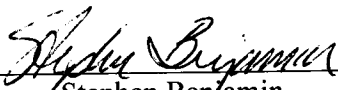
10. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor or against any party based upon which party drafted or participated in drafting this Agreement.

11. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

Agreement continues on the follow pages.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and signed as of the day and year indicated by their signatures below.

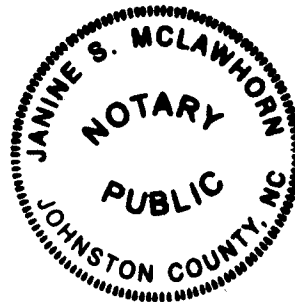
NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
STANDARDS DIVISION

By: 
Stephen Benjamin
Director, Standards Division
NCDA&CS

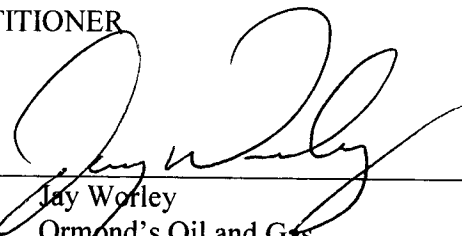
Subscribed and sworn to before me
this the 19 day of January, 2018.


Notary Public

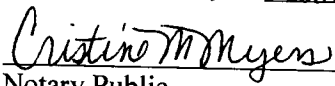
My Commission Expires: 8/9/2022



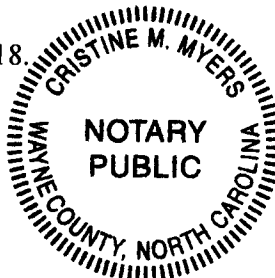
PETITIONER

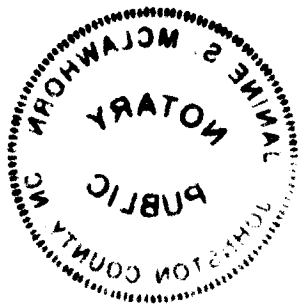
By: 
Jay Worley
Ormond's Oil and Gas
9535 US Hwy 70E
Princeton, North Carolina 27569

Subscribed and sworn to before me
this the 10 day of January, 2018.


Notary Public

My Commission Expires: 03/27/21





RECEIVED

JAN 16 2018

SERVICE TO STATE AGENCIES

RELEASE OF ALL CLAIMS

KNOW ALL MEN BY THESE PRESENTS, that I, O'Shella Gatling, for and in consideration of the sum of Eight Thousand Ninety Dollars and Twenty-Eight Cents (\$8,090.28) paid by the North Carolina Department of Agriculture and Consumer Services by and through the North Carolina Forest Service, do hereby release, and discharge and by these presents do for myself, my heirs, executors, administrators and assigns release and forever discharge the North Carolina Department of Agriculture and Consumer Services, the North Carolina Forest Service, and the State of North Carolina, its officers, employees, servants and agents of and from any and all claims, demands, damages, actions, cause of action of whatever kind or nature arising out of Forest Development Program application number 032218 and concerning property located on Godwin Road, Bertie County, North Carolina.

I understand that this release is made as a compromise to avoid expense and to terminate all controversy and claims for injuries and/or damages of whatever nature, known or unknown, including future developments thereof, in any way growing out of or connected with said Forest Development Program application number 032218. I agree that the sum paid is solely by way of compromise of a disputed claim, and it is therefore specifically agreed that this release shall be a complete bar to all claims or suits for injuries or damages of whatsoever nature relating to Forest Development Program application number 032218.

I further understand that until this release is executed by all parties and payment has been received by the claimant, that this release will not become effective.

IN WITNESS WHEREFORE, I have hereunto set my hand this 16th day of August, 2018.

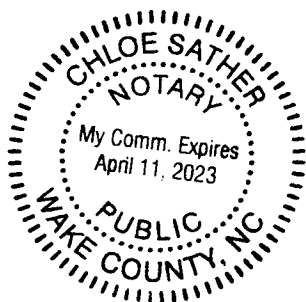
O'Shella Gatling
O'Shella Gatling, Claimant
2302 W. Club Boulevard
Durham, NC 27705

North Carolina
County of Wake

Personally appeared before me this day O'Shella Gatling and acknowledged the execution of the foregoing Release of All Claims. Witness my hand and notarial seal this the 16 day of August, 2018.

C. Nather
Notary Public

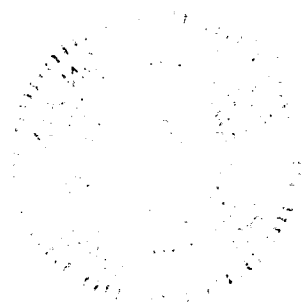
My Commission Expires: April 11, 2023



AGREED TO:

North Carolina Department of Agriculture
and Consumer Services by and through
The North Carolina Forest Service

Scott Bissette
Scott Bissette, Assistant Commissioner



SETTLEMENT AGREEMENT AND RELEASE

RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected below the signature of Tina L. Hlabse, appearing on page 2, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter, "Department") and Owen Peele (hereinafter "Mr. Peele").

WITNESSETH:

WHEREAS, on August 27, 2015, Mr. Peele entered into a cost share contract agreement with the Division of Soil and Water Conservation ("DSWC") bearing contract number 69-2016-002 (hereinafter the "agreement") in the sum of Seventeen Thousand Five Hundred Twenty-Nine Dollars (\$17,529.00) for the installation, operation and maintenance of structures to protect water quality. Subsequently, there was a dispute as to the number of structures approved.

WHEREAS, the Department and Mr. Peele desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

NOW, THEREFORE, IT IS RESOLVED that, in consideration of the Department paying to Mr. Peele the sum of Seventeen Thousand Five Hundred Twenty-Nine Dollars (\$17,529.00) and for other good and sufficient consideration, Mr. Peele on behalf of himself, his heirs, executors, administrators and assigns agrees to release and discharge the North Carolina Department of Agriculture and Consumer Services, the State of North Carolina, its officers, employees, servants and agents, individually and officially from any and all liability arising out of the cost-share contract 69-2016-002 referenced above upon receipt of said payment. The parties further covenant and agree as follows:

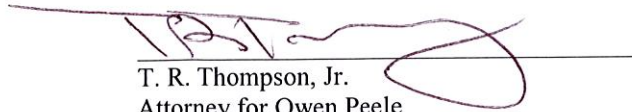
1. No party admits or acknowledges any wrong doing or liability to any other party and specifically denies the existence of such liability.
2. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
3. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations, and agreements are merged into this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
4. The parties attest that this Settlement Agreement was voluntarily made after ample opportunity to review the document with any individuals, advisors, and counsel.

5. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:



Owen Peele
282 Peele Road
Aurora, NC 27806-9543
Date: 5/22/17



T. R. Thompson, Jr.
Attorney for Owen Peele
24934 NC 33 Highway East
Aurora, NC 27806
Date: 5/22/17

Tina L. Hlabse
General Counsel
NC Department of Agriculture and Consumer Services
1001 Mail Service Center
Raleigh, North Carolina 27699-1001
Date: _____

Vernon Cox, Director
Division of Soil and Water Conservation
NC Department of Agriculture and Consumer Services
1614 Mail Service Center
Raleigh, North Carolina 27699-1614

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

IN THE OFFICE OF
ADMINISTRATIVE HEARINGS
18 DAG 02248 & 18 DAG 03387

MR. PEDRO HERNANDEZ,
MS. ZENAIDA HERNANDEZ,
MR. FELICITO HERNANDEZ,

Petitioners,

v.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, MEAT & POULTRY
INSPECTION DIVISION,

Respondent.

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. 150B-22 and 150B-41(c), which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, this agreement (hereinafter the "Agreement") is made and entered into by and between Respondent, the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division (hereinafter the "NCDA&CS, MPID"), and Petitioners, Mr. Pedro Hernandez, Ms. Zenaida Hernandez, and Mr. Felicito (Phil) Hernandez (collectively hereinafter "Petitioners"), effective as of the date reflected by signature of Dr. Beth Yongue, Director of the NCDA&CS, MPID, appearing on page 9 of this Agreement.

RECITALS

WHEREAS, on or about April 29, 2013 Petitioners and NCDA&CS, MPID entered into a Settlement Agreement (hereinafter the "2013 Agreement") resolving a dispute surrounding a civil penalty that NCDA&CS, MPID issued to Petitioners due to alleged violations of North Carolina Meat Inspection and Poultry Products Laws (a copy the 2013 Agreement is attached as Appendix A to this Agreement);

WHEREAS, Petitioner Felicito Hernandez still owes NCDA&CS, MPID Three Thousand Six Hundred Dollars (\$3,600.00) under the terms of the 2013 Agreement;

WHEREAS, on February 19, 2018, NCDA&CS, MPID issued Petitioners a civil penalty in the amount of One Hundred and Twelve Thousand Dollars (\$112,000.00) (hereinafter the "First Civil Penalty") for alleged violations of North Carolina Meat Inspection and Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes) (a copy of the First Civil Penalty is attached as Appendix B to this Agreement);

WHEREAS, on April 3, 2018, NCDA&CS, MPID issued Petitioners a civil penalty in the amount of Twenty Five Thousand Dollars (\$25,000.00) (hereinafter the "Second Civil Penalty") for alleged violations of North Carolina Meat Inspection and Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes) (a copy of the Second Civil Penalty is attached as Appendix C to this Agreement);

WHEREAS, Petitioners deny the alleged violations in the First Civil Penalty and the Second Civil Penalty and deny that they have committed any violation of law;

WHEREAS, Petitioners timely appealed the First Civil Penalty by filing a Petition for a Contested Case Hearing with the North Carolina Office of Administrative Hearings (18 DAG 02248);

WHEREAS, Petitioners timely appealed the Second Civil Penalty by filing a Petition for a Contested Case Hearing with the North Carolina Office of Administrative Hearings (18 DAG 03387);

WHEREAS, NCDA&CS, MPID and Petitioners desire to fully and finally compromise and settle all disputes and controversies between them involving or arising out the First Civil Penalty and the Second Civil Penalty;

WHEREAS, NCDA&CS, MPID and Petitioners desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of litigation.

AGREEMENT

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, NCDA&CS, MPID and Petitioners agree as follows:

1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by reference as if fully set forth herein.

2. Petitioners agree to remove all meat slaughter and processing equipment, including, but not limited to the current scalding vat, from the premises located at 1919, 1941, 1942, 1945, and 1953 Dilling Farm Road, Charlotte, North Carolina 28214 within thirty (30) days of the effective date of this Agreement.

a. Petitioners shall provide NCDA&CS, MPID a written statement indicating where each item of equipment was sold or disposed of.

- b. Nothing in this Agreement shall prohibit Petitioners from retaining any equipment that will be lawfully used solely for the purpose of operating under the "Producer/Grower 20,000 Poultry Exemption" as outlined in Paragraph 11 of this Agreement.
- 3. Petitioners shall not return any meat slaughter or processing equipment to the premises located at located at 1919, 1941, 1942, 1945, or 1953 Dilling Farm Road, Charlotte, North Carolina 28214 without first receiving express written permission from NCDA&CS, MPID and doing so without such permission shall constitute a breach of this Agreement.
 - a. Nothing in this Agreement shall prohibit Petitioners from acquiring equipment that will be lawfully used solely for the purpose of operating under the "Producer/Grower 20,000 Poultry Exemption" as outlined in Paragraph 11 of this Agreement.
- 4. Petitioners will grant NCDA&CS, MPID inspectors access to any property they own, or have authority to grant right of access to, including but not limited to located at 1919, 1941, 1942, 1945, and 1953 Dilling Farm Road, Charlotte, North Carolina 28214, for a period of six (6) years following the effective date of this Agreement.
 - a. The right of access granted to NCDA&CS, MPID will be authorized solely for the purpose of conducting inspections into potential violations of North Carolina Meat Inspection and Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes).
 - b. The right of access granted to NCDA&CS, MPID shall specifically include all barns and out buildings in which meat or poultry slaughter, processing, or storage could occur.
 - c. The right of access granted to NCDA&CS, MPID shall not include building that are being used solely as residential dwelling places (i.e., bedrooms/living rooms in a house).
 - d. Petitioners will provide NCDA&CS, MPID a written list of all property that they own or have authority to grant right to access to within thirty (30) days of the effective date of this Agreement.
 - e. If Petitioners acquire new property for which they have the authority to grant right of access within six (6) years of the effective date of this Agreement, they shall notify NCDA&CS, MPID of the property within fifteen (15) days of acquiring the authority to grant right of access.
- 5. Petitioners agree that they shall not commit any future violations of North Carolina Meat Inspection Law or Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes) and acknowledge that doing so shall constitute a breach of this agreement.

6. Petitioner Felicito Hernandez agrees to pay NCDA&CS, MPID the entire Three Thousand Six Hundred Dollars (\$3,600.00) that remains due under the 2013 Agreement in a single payment.

- a. Petitioner Felicito Hernandez payment of Three Thousand Six Hundred Dollars (\$3,600.00) is due to NCDA&CS, MPID within thirty (30) days of the effective date of this Agreement.
- b. Petitioner Felicito Hernandez payment of Three Thousand Six Hundred Dollars (\$3,600.00) shall be mailed addressed as follows:

North Carolina Department of Agriculture and Consumer Services
Meat and Poultry Inspection Division
Attention: Dr. Beth Yongue, Director
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

- c. Petitioner Felicito Hernandez's payment shall be considered to have been paid on time if he sends the payment by U.S. Postal Service First Class Mail, or other commercial carrier, prepaid, and the envelope is postmarked on or before the date when the payment is due.

7. Petitioner Felicito Hernandez agrees to pay NCDA&CS, MPID, and NCDA&CS, MPID agrees to accept, Sixty One Thousand Dollars (\$61,000.00) in order to fully resolve any and all disputes involving the First Civil Penalty and the Second Civil Penalty.

- a. Petitioner Felicito Hernandez shall pay the Sixty One Thousand Dollars (\$61,000.00) in sixty on (61) payments of One Thousand Dollars (\$1,000.00) each.
- b. Petitioner Felicito Hernandez's first payment of One Thousand Dollars (\$1,000.00) shall be due on sixty (60) days from the effective date of this Agreement. Respondent's remaining payments, in the amount of One Thousand Dollars (\$1,000.00) each, shall be due on the first day of every subsequent month until the remaining balance is completely paid.
- d. Petitioner Felicito Hernandez payments of One Thousand Dollars (\$1,000.00) each shall be mailed addressed as follows:

North Carolina Department of Agriculture and Consumer Services
Meat and Poultry Inspection Division
Attention: Dr. Beth Yongue, Director
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

- e. Petitioner Felicito Hernandez's payments shall be considered to have been paid on time if he sends the payment by U.S. Postal Service First Class Mail, or other commercial carrier, prepaid, and the envelope is postmarked on or before the date when the payment is due.

8. As further evidence of good faith and as consideration for this Agreement, Petitioner Felicito Hernandez acknowledges that he has signed, before a Notary Public, a Confession of Judgment in the amount of Sixty One Thousand Dollars (\$61,000.00) in favor of NCDA&CS, MPID (a copy of the Confession of Judgment is attached as Appendix D to this Agreement).

- a. Petitioner Felicito Hernandez further acknowledges and agrees that if he fails to make any payment required under the terms of this Agreement, NCDA&CS, MPID may institute an action in Wake County Superior Court, and file the Confession of Judgment, in order to recover any unpaid amount under the terms of this Agreement. An action to recover any amount under this section shall not deprive NCDA&CS, MPID of any other remedies permitted by law against Petitioner Felicito Hernandez.
- b. NCDA&CS, MPID hereby agrees that, so long as Petitioner Felicito Hernandez complies with the terms of this Agreement, NCDA&CS, MPID will not institute any civil action against Petitioner Felicito Hernandez to collect the sum of money owed pursuant to this Agreement or file the Confession of Judgment Petitioner Felicito Hernandez has executed and provided to NCDA&CS, MPID.
- c. Furthermore, NCDA&CS, MPID agrees to file the Confession of Judgment only if Petitioner Felicito Hernandez fail to make a payment on time, pursuant to the terms of this Agreement, after giving Petitioner Felicito Hernandez notice of his failure to make said payment, and after allowing Petitioner Felicito Hernandez fifteen (15) business days to cure his breach by paying the amount due in full.
- d. NCDA&CS, MPID reserves the right to forgo filing the Confession of Judgment if it finds a good reason to refrain from doing so. However, if NCDA&CS, MPID in the sound exercise of its discretion refrains from filing the Confession of Judgment, it is not a waiver of its right to do so later.
- e. In the unexpected event of Petitioner Felicito Hernandez's death during this time in which he is still making payments pursuant to Paragraph 8 of this Agreement, if at the time of his death Petitioner Felicito Hernandez had not breached, and was in compliance with, the terms of this Agreement, then NCDA&CS, MPID will waive the remaining amounts owed. Nothing in this Agreement waives NCDA&CS, MPID's right to collect any amount owed from Petitioners' estates, successors, and/or assigns for any amount owed as a result of a breach of this Agreement.

- f. NCDA&CS, MPID further agrees that, once Petitioner Felicito Hernandez has made their final payment and NCDA&CS, MPID has received Sixty One Thousand Dollars (\$61,000.00) in satisfaction of the terms of this Agreement, NCDA&CS, MPID shall provide to Petitioner Felicito Hernandez a document confirming receipt of payment and releasing Petitioner Felicito Hernandez from further liability under this Agreement. At this time, NCDA&CS, MPID will also provide Petitioner Felicito Hernandez with the original Confession of Judgment, unless original Confession of Judgment has already been filed by reason of Petitioner Felicito Hernandez's breach of this Agreement.

9. If Petitioner Felicito Hernandez commits any violation of North Carolina Meat Inspection Law and/or Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes) during the time in which he is still making payments pursuant to Paragraph 7 of this Agreement, Petitioner Felicito Hernandez shall be immediately responsible for paying NCDA&CS, MPID the full sum of One Hundred and Thirty Seven Thousand Dollars (\$137,000.00) listed in the First and Second Civil Penalty, less any amount paid pursuant to Paragraph 7 of this Agreement prior to the violation.

10. Petitioner Pedro Hernandez and Petitioner Zenaida Hernandez are not financially responsible for any of the payments and/or potential payments agreed to by Petitioner Felicito Hernandez under the terms of this Agreement.

- a. If Petitioner Pedro Hernandez commits any violation of North Carolina Meat Inspection Law and/or Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes), or allows any such violation to occur on land that he owns, during the time in which Petitioner Felicito Hernandez is still making payments pursuant to this Agreement, then Petitioner Pedro Hernandez shall immediately become jointly and severally responsible for all sums owed by Petitioner Felicito Hernandez under this Agreement.
- b. If Petitioner Zenaida Hernandez commits any violation of North Carolina Meat Inspection Law and/or Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes), or allows any such violation to occur on land that she owns, during the time in which Petitioner Felicito Hernandez is still making payments pursuant to this Agreement, then Petitioner Zenaida Hernandez shall immediately become jointly and severally responsible for all sums owed by Petitioner Felicito Hernandez under this Agreement.

11. Nothing in this Agreement shall prohibit Petitioners from lawfully operating under the "Producer/Grower 20,000 Poultry Exemption," provided that Petitioners fully comply with all applicable laws and rules and operate in accordance with requirements of Appendix E to this Agreement, which is hereby incorporated by reference. Petitioners further acknowledge and agree that:

- a. Petitioners will not begin slaughtering, processing, or selling any poultry without first obtaining a written statement from NCDA&CS, MPID indicating that the premises where the slaughter/processing will occur, and the equipment that will be utilized, is sanitary.
- b. If Petitioners choose to operate under the "Producer/Grower 20,000 Poultry Exemption," Petitioners agree to keep accurate records documenting: the date and quantity of all poultry slaughtered and the date and quantity of all poultry sold. Petitioner further agrees to make these records available to NCDA&CS, MPID upon request and retain them for a period of three (3) years after the sale date.
- c. Nothing in this Agreement shall prohibit Petitioners from buying and utilizing an appropriate poultry scalding vat for use in accordance with the "Producer/Grower 20,000 Poultry Exemption."

12. Petitioners agrees to voluntarily dismiss their Petitions for Contested Case Hearings in North Carolina Office of Administrative Hearing File Nos. 18 DAG 02248 & 18 DAG 03387 with prejudice within thirty (30) days of the effective date of this Agreement.

13. An action to recover any amount under this Agreement shall not relieve any party from any other penalty permitted by law.

14. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referenced in this Agreement.

15. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

16. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

17. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed and signed by all signatories hereto.

18. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor or against any party based upon which party drafted or participated in drafting this Agreement.

19. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and

this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

20. The parties attest that this Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.

21. This Agreement shall be binding upon the parties, their successors and assigns, upon execution by the undersigned, who represent and warrant that they are authorized to enter into this Agreement on behalf of the parties hereto.

22. Petitioners deny they are guilty of any violation of law and note that their consent to the terms of this Agreement is solely in order to timely resolve this matter. This Agreement shall not be constituted as an admission of guilt as to any of the alleged violations. However, NCDA&CS, MPID and Petitioners expressly acknowledge and agree that this Agreement does not purport to address or resolve any potential criminal liability for the alleged violations.

Agreement continues on the follow pages.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and consent to the terms contained therein by way of their signatures below.

PETITIONERS

Pedro Hernandez
Mr. Pedro Hernandez

7/24/18
Date

Zenaida Hernandez
Ms. Zenaida Hernandez

7/24/18
Date

Felicit Hernandez
Mr. Felicito Hernandez

7/24/18
Date

Each of the three signatures above was subscribed and sworn to before me this the 24 day of July, 2018.

Shawn A. Gregory
Notary Public

My Commission Expires: 10/22/22



RESPONDENT

Dr. Beth Yongue
Dr. Beth Yongue, Director
North Carolina Department of Agriculture
and Consumer Services, Meat and Poultry
Inspection Division

August 2, 2018
Date

Subscribed and sworn to before me this the 2 day of August, 2018.

Linda M. Oltz
Notary Public

My Commission Expires: 1/31/2021



STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

IN THE OFFICE OF
ADMINISTRATIVE HEARINGS
12 DAG 07297

PEDRO HERNANDEZ,
ZENaida HERNANDEZ,
FELICITO HERNANDEZ,
Petitioners,

v.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, MEAT & POULTRY
INSPECTION DIVISION,

Respondent.

SETTLEMENT AGREEMENT

RECITALS

Pedro Hernandez, Zenaida Hernandez and Felicito Hernandez (aka Phil Hernandez) (the "Petitioners") and the North Carolina Department of Agriculture and Consumer Services (the "Respondent") desire to fully and finally settle this and all other disputes and controversies surrounding the Petitioner's operation of an unlicensed slaughter facility and desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

Whereas, the Respondent received anonymous information on or about July 12, 2011, alleging that there was a non-inspected slaughter and/or processing operation being conducted at 1945 Dilling Farms Road, Charlotte, North Carolina. On July 23, 2011, Respondent's Food Compliance Officer Percy Russell (hereinafter FCO Russell) conducted surveillance at the property located at 1945 Dilling Farms Road, Charlotte, North Carolina, which he determined belonged to Petitioners Pedro and Zenaida Hernandez. FCO Russell observed vehicles entering and leaving the property location of the alleged non-inspected slaughter and/or processing facility.

Whereas, on August 27, 2011, Respondent's Food Inspector Jose Romero (hereinafter FI Romero), while posing as a member of the general public, went to 1945 Dilling Farm Road,

Charlotte, North Carolina, and purchased two (2) pounds of pork ribs, one (1) pound of stew meat, six (6) pounds of pork lungs (per 9 CFR § 310.16(a) livestock lungs are not to be saved for use as human food), a pork heart, a pork liver, a beef kidney, and one slaughtered and processed chicken (hereinafter 8/27/2011 purchase). FI Romero paid a total of \$59.00 in cash for the meat and poultry products which were packaged in five white plastic bags.

Whereas, FI Romero then transferred the five white plastic bags comprising the 8/27/2011 purchase and their contents to FCO Russell, following the Respondent's chain of custody procedures. FCO Russell took possession of the bags, photographed them and examined them and their contents.

Whereas, when FCO Russell examined the five white plastic bags he found that they bore no North Carolina Department of Agriculture & Consumer Services ("NCDA&CS") or United States Department of Agriculture ("USDA") marks of inspection or labeling.

Whereas, FCO Russell examined and photographed the contents of the five white plastic bags, finding that the meat pieces bore no NCDA&CS or USDA marks of inspection and several meat pieces had signs of adulteration: feces on pork meat and pork lung that was unfit for human consumption as food.

Whereas, FCO Russell examined the chicken meat and found it bore no NCDA&CS or USDA marks of inspection. The chicken meat showed signs of adulteration: viscera still attached to the chicken carcass.

Whereas, FCO Russell transferred the 8/27/2011 purchase, the five white plastic bags and their contents, to storage in the Respondent's Raleigh Compliance office, following Respondent's chain of custody procedures.

Whereas, on October 14, 2011, Respondent's Food Compliance officers Melanie Pollard ("FCO Pollard") Daniel Moody, Jr. ("FCO Moody") and FCO Russell, accompanied by members of the Charlotte/Mecklenburg Police Department, executed a search warrant on the

property owned by Mr. Pedro Hernandez and Ms. Zenaida Hernandez at 1945 Dilling Farm Road, Charlotte, NC, for the purpose of investigating the slaughtering, processing and selling of misbranded, non-inspected and adulterated meat and poultry products to the general public.

Whereas, when the FCOs announced that they were present to execute this search warrant, Mr. Felicito Hernandez, 624 Trailing Rock Drive, Charlotte, NC, voluntarily stated that he was in charge of the non-inspected slaughtering and processing operation.

Whereas, upon entering the property, FCOs Russell, Moody and Pollard observed, photographed and shot video of a wooden building located there, with live animals: twelve sheep; forty-five goats; eleven cattle; sixty-six hogs; and eighty chickens.

Whereas, Respondent's FCOs also found a roofed, open-sided structure that was serving as a slaughter area, containing a stainless steel table and a white metal bathtub with a propane tank and burner system attached to it. The propane tank and burner system indicate that the tub was used as a scalding vat for pigs.

Whereas, adjacent and attached to the slaughter area was a holding pen containing three pigs.

Whereas, attached to the slaughter area was a wooden building that was approximately twenty feet long and twenty feet wide. The FCOs observed signs that the building was being used for processing slaughtered animals and storing non-inspected meat and poultry being offered for sale and sold to the general public. The building contained a commercial cooler with three glass doors, four household-type chest freezers and one household type refrigerator-freezer. All of these contained non-inspected, misbranded and/or adulterated packaged meat from goats, sheep, pork or beef being offered for sale to the general public.

Whereas, FCOs Russell, Moody and Pollard counted eight-five packages of non-inspected and/or adulterated meat products in the cooler, freezers and refrigerator in the wooden building, and estimated the total weight of the meat products to be nine hundred and forty (940)

pounds. They tagged the meat products as detained, numbers 4110 through 4115, and photographed the packages.

Whereas, FCO's Russell, Moody and Pollard opened and examined the packages and found non-inspected or misbranded meat products from goats, sheep, cattle and swine. Much of the meat products were adulterated with fecal material.

Whereas, Mr. Felicito Hernandez voluntarily destroyed the estimated 940 lbs. of detained meat products while the FCOs observed and photographed him doing so.

The FCOs went into the processing room and found a meat band saw, a one compartment stainless steel sink with an attached water hose, ten plastic containers, several meat scales, one scalding water tank (used for processing chickens), one wooden cutting block, a wooden table, several knives, and one metal cone used for slaughtering chickens.

Whereas, when the FCOs continued to execute the search warrant, they observed Mr. Felicito Hernandez slaughtering and processing chickens for offering for sale to the general public.

Whereas, the FCOs observed several unsanitary conditions capable of causing direct adulteration of meat products:

- a. the meat band saw contained meat particles from a previous day's use;
- b. blood, bones, hooves and horns were left on the floor from a previous day's slaughtering/processing activity;
- c. the equipment, tables and buildings showed no signs of routine cleaning or sanitizing;
- d. the processing table next to the killing floor was topped with a white cutting board which was discolored and deeply scored with knife marks;
- e. the stainless steel processing table next to the killing floor had a build-up of dried blood residue and animal hair from a previous day's slaughter on its surface;

- f. there was no source of hot water in the building,
- g. there was no device to sanitize knives in the building;
- h. the bathtub used as a scalding vat had a built-up layer of an unidentified black substance and animal hair on the surface from a previous day's use;
- i. a bag containing Kevlar gloves had a heavy build-up of dirt, grime and meat particles on its surface from a previous day's use;
- j. the knives used for processing meat had a build-up of dried blood and animal hair on the surface area from a previous day's use.

Whereas, upon inspecting the south end of the Hernandez' property, 1945 Dilling Farm Road, Charlotte, North Carolina, an area comprised of approximately five acres, the FCOs observed freshly-dug holes. When they examined these holes, they found internal organs, heads and bones typically left over after the slaughter of animals in a non-inspected slaughter and processing facility. They saw one partially-decomposed calf in one hole and a second partially-decomposed calf in a second hole near the south end of the property.

Whereas, the FCOs issued Mr. Felicito Hernandez an "on-site" cease and desist letter concerning his sale of non-inspected/misbranded/adulterated meat and poultry products. Mr. Felicito Hernandez voluntarily admitted that he had been slaughtering, processing and selling meat and poultry products to the general public for three years.

Whereas, the FCOs seized three ledger books found inside the non-inspected slaughter/processing facility. The ledger books contained the names and/or telephone numbers of customers, including restaurants and dated entries of the dollar amounts paid for purchases.

Whereas, on October 26, 2011, FCO Russell and Mr. Matt Hood, Mecklenburg County Environmental Health Specialist, visited A Piece of Havana Restaurant, 11126 South Tryon Street, Charlotte, NC, ("APOHR") a possible purchaser of non-inspected meat products from the Hernandez's non-inspected facility. During the visit they received a signed statement from Mr.

Carlos Alvarez, co-owner of APOHR, stating that he purchased three whole pigs from Mr. Felicito Hernandez at the slaughter/processing facility at 1945 Dilling Farm Road, Charlotte, NC, for his personal use, in September, 2011, but did not bring the three whole pigs into APOHR. Mr. Alvarez stated that the pigs he purchased from Mr. Felicito Hernandez did not have a NCDA&CS or USDA mark of inspection;

Whereas, on June 21, 2012, Respondent issued to the Petitioners a civil penalty assessment finding that Petitioners had been found to be slaughtering, processing, storing, offering for sale and selling non-inspected/misbranded and/or adulterated meat and poultry products to the general public and improperly disposing of dead domesticated animals in violation of N.C. General Statutes §§ 106-549.17, 106-549.23, 106-549.53, 106-549.56, and 106-403;

Whereas, in its civil penalty assessment, Respondent imposed upon the Petitioners civil penalties:

\$20,000.00 for violation of N.C. General Statutes § 106-549.23(3)a (Misbranded Meat);

\$14,000.00 for violation of N.C. General Statutes § 106-549.23(3)b (Not Inspected Meat);

\$15,000.00 for violation of N.C. General Statutes § 106-549.23(3)a (Adulterated Meat);

\$3,000.00 for violation of N.C. General Statutes § 106-549.56(2)a (Adulterated Poultry);

\$4,000.00 for violation of N.C. General Statutes § 106-549.23(1)a (Prohibited Slaughter);

\$2,000.00 for violation of N.C. General Statutes § 106-549.53(a) (Inspection before Slaughter - Poultry);

\$2,000.00 for violation of N.C. General Statutes § 106-549.56(2)a (Misbranded Poultry);

\$2,000.00 for violation of N.C. General Statutes § 106-549.56(2)b (Not Inspected Poultry);

\$4,000.00 for violation of N.C. General Statutes § 106-549.17a (Inspection before Slaughter/ Meat);

\$2,000.00 for violation of N.C. General Statutes § 106-403 (Disposition of Dead Domesticated Animals);

Whereas, the sum of the civil penalty assessment was \$68,000.00; and

Whereas the Petitioners deny they are guilty of any willful violation of the above-referenced laws and regulations and their consent to the terms of this Agreement is made in order to timely resolve this matter and shall not be constituted as an admission of guilt, as to any of the violations alleged herein.

WHEREAS the parties desire to resolve these matters without further litigation.

NOW THEREFORE, the parties agree as follows:

- 1) Whereas, within ten days (10) of the date both sides have signed this formal written settlement agreement, Petitioners shall remove or cause to be removed all equipment and other items (hereinafter, "equipment") that can be used for the slaughter and/or processing of animals for human consumption, except for the following items:
 - a. The hog scalding vat (appears to be a repurposed bath tub; investigation photo no. 18);
 - b. The commercial meat-cutting band saw (investigation photo no. 12); and
 - c. The chicken slaughtering/processing equipment (investigation photo no. 14).
- from 1945 Dilling Farm Road, Charlotte, NC, and all such items will be disposed of in a lawful fashion by sale or disposal in a landfill or other appropriate facility within forty-eight hours after removal. Removal of the equipment from the building will

take place in the presence of the Respondent's designated representative. If the equipment is sold, Petitioner shall provide the Respondent with the name and address of the person or company purchasing it within twenty-four hours of delivering the equipment to the purchaser. The parties further understand and agree that Petitioners may use the three listed items of equipment mentioned above only for the slaughtering or processing of animals of their own raising, and the preparation by them and transportation in intrastate commerce of the carcasses, parts thereof, meat and meat food products of such animals exclusively for use by them and members of their households and their nonpaying guests and employees, as provided in N.C. Gen. Stat. § 106-549.27(a)(1);

- 2) Petitioner Felicito Hernandez hereby agrees to pay the sum of fifty-four thousand dollars (\$54,000.00) to the Respondent as consideration for this settlement agreement. The parties agree and acknowledge that the Respondent is required by law to turn said payment over to the Department of Public Instruction. Petitioner may pay this sum in sixty-seven monthly installments of eight hundred dollars (\$800.00) and a final payment of four hundred dollars (\$400) due on the 18th day of each month, beginning on that date of the month following the month in which all of the parties to this Settlement Agreement have executed it. A monthly payment is late and the Petitioners are in breach of this Settlement Agreement if payment is received after 5:00 p.m. of the date due. Receipt of payment in an envelope postmarked or otherwise dated by commercial courier or the U.S. Postal Service on or before the date due, which is received after the date due, shall be deemed to be on time;
- 3) As further consideration Petitioners Felicito Hernandez and Pedro Hernandez have signed Appendix A, a Confession of Judgment in favor of the Respondent for the sum of fifty-four thousand dollars (\$54,000.00). The Respondent shall not file said

Confession of Judgment with the Court unless the Petitioner Pedro or Petitioner Felicito Hernandez violates this settlement agreement by:

- a. Failing to pay the \$54,000.00 within the time and according to the terms provided in this Settlement Agreement (applicable to Felicito Hernandez, only);
 - b. Failing to remove the equipment from 1945 Dilling Farm Road, Charlotte, NC, by the deadline stated herein, unless Respondent finds that there is a good reason to grant the Petitioners additional time in which to do so;
 - c. Returning the equipment or other items to 1945 Dilling Farm Road, Charlotte, NC, that, in the opinion of the Respondent's compliance officers, enables the Petitioners to conduct unlicensed, uninspected slaughter there again; or
 - d. Committing another violation of the laws and/or rules enforced by the Meat and Poultry Inspection Division, specifically but not limited to Articles 49B and 49C of the North Carolina Mandatory Meat and Poultry Inspection Law.
- 4) Respondent may deem Petitioners Felicito Hernandez and Pedro Hernandez to be in breach of this Settlement Agreement upon finding:
- e. Petitioner Felicito Hernandez has failed to make timely payment; if Petitioner Felicito Hernandez finds he lacks sufficient funds to make a monthly payment, he shall notify the Respondent before payment is due and request that the payment be rolled over to the next month.
 - f. The following month Petitioner Felicito Hernandez shall bring his payments up to date (paying double the usual monthly payment) unless he has received permission from the Respondent to pay less than double the monthly payment, \$1,600.00.

- g. Failure to make payment in full each month without prior notification to the Respondent shall constitute a material breach of this Settlement Agreement;
 - h. If the Respondent files the Confession of Judgment for such breach or any other breach of this Settlement Agreement, it shall not excuse Petitioner Felicito Hernandez from his continuing obligation to make monthly payments.
 - i. When it files the Confession of Judgment, the judgment shall reflect and give credit for payments made up to date of filing of the Confession of Judgment against the amount of \$68,000.00.
 - j. There is no interest charged on the unpaid balance and no penalty for early payment.
- 5) Respondent hereby reserves the right to forego filing Appendix B, the Confession of Judgment, against the Petitioners if it finds a good reason to refrain from doing so. However, if Respondent in the sound exercise of its discretion refrains from filing Appendix B, this is not a waiver of its right to do so later;
- 6) Petitioners have, contemporaneously with their execution of this Settlement Agreement, signed a Dismissal with Prejudice of the above-captioned case in the North Carolina Office of Administrative Hearings, waiving their right to a hearing on the Respondent's Civil Penalty Assessment made against them;
- 7) Petitioners Felicito, Pedro and Zenaida Hernandez hereby agree not to offer any land that they own, rent, or control, together or separately, as a place to slaughter and/or process animals for food, except as provided by law for animals of their own raising, to be fed to their family, employees or non-paying guests;

- 8) Petitioners do hereby promise and grant to the Respondent the right to enter the property located at 1945 Dilling Farm Road, Charlotte, NC, and all other properties that they currently own, either jointly or individually, lease or have use of. Petitioners shall, within five days after Petitioners' execution of this Settlement Agreement, provide to the Respondent a list of all the properties they currently own, lease or have use of, both jointly or individually, including the properties' street address or gps coordinates. Petitioners shall provide to the Respondent a list of all said properties, Appendix B, which is attached hereto and incorporated herein by reference. Respondent's right to enter and to inspect those properties and their buildings shall be without notice, at any time (24/7). Petitioners further promise and agree that, upon purchasing, leasing or otherwise receiving the use and/or control of any other parcels of land in the State of North Carolina after their execution of this agreement, they shall:
- k. notify the Respondent within forty-eight hours of receiving access to or control of said parcels of land;
 - l. grant Respondent the same right of entry and inspection thereto; and
 - m. provide the Respondent with the newly acquired land parcel's address or gps coordinates.
- 9) Respondent hereby agrees that the right to conduct such inspections shall not include the right to enter and inspect any building on any of the properties mentioned herein that are used solely as human habitation; and
- 10) At the first possible date but no later than thirty (30) days after his execution of this Settlement Agreement, Petitioner Felicito Hernandez shall apply for and receive a livestock dealer's license from the Veterinary Division of the N.C. Department of Agriculture and Consumer Services, and comply with all laws and rules applicable to

livestock dealers. Further, Petitioner Felicito Hernandez agrees that, upon demand, he shall permit the Respondent's employees and agents to inspect and copy all records he maintains in the course of livestock dealing.

11) Petitioners further agree not to commit any other violations of the North Carolina Meat and Poultry Inspection Law, articles 49B, 49C and 49H.

In return, the Respondent hereby agrees as follows:

- 1) Respondent accepts fifty-four thousand dollars (\$54,000.00) in compromise of its civil penalty assessment in order to settle this matter;
- 2) Respondent hereby releases Petitioner Ms. Zenaida Hernandez from personal liability and responsibility for the violations described above and from any obligation to pay the civil penalty assessed against her, her spouse, Petitioner Pedro Hernandez, and her son, Petitioner Felicito Hernandez;
- 3) Respondent agrees not to file Petitioners' Confession of Judgment, Appendix A, unless Petitioner Pedro Hernandez or Petitioner Felicito Hernandez violates this Settlement Agreement;
- 4) Respondent hereby agrees that, if Petitioners comply with the Settlement Agreement completely and commit no violations of the North Carolina Meat and Poultry Inspection Law for from the date the Settlement Agreement is signed by both parties and for sixty-eight months thereafter, the Respondent will return the original Confession of Judgment to the Petitioners for cancellation;
- 5) In the alternative, if, following signing and execution by both parties of the Settlement Agreement, either of the Petitioners:
 - n. applies for a license to operate a custom slaughter facility; and
 - o. receives a license to operate a custom slaughter facility; and

- p. opens a licensed custom slaughter facility; and
- q. continues to operate a licensed custom slaughter facility for one year after receiving that license,

the Respondent will return the original Confession of Judgment to you for cancellation;

6) Upon receipt of the final payment bringing Petitioner Felicito Hernandez payments up to \$54,000.00, the Department shall surrender Appendix A, the original of Petitioner's Confession of Judgment, to either Petitioner Felicito Hernandez or to Petitioner Pedro Hernandez or to their legal counsel, unless Appendix A has been filed with the Clerk of Court of the county in which Petitioner Felicito Hernandez or Petitioner Pedro Hernandez resides.

The parties mutually agree to act in good faith in the implementation of this agreement. The parties agree to bear their own attorneys fees and costs. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

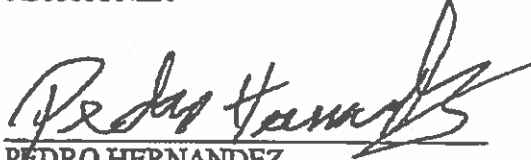
The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates indicated below:

PETITIONER


PEDRO HERNANDEZ

Date: 4/29/13


FELICITO HERNANDEZ


Date: 4/29/13

ATTORNEY FOR PETITIONERS


JOSEPH LEDFORD

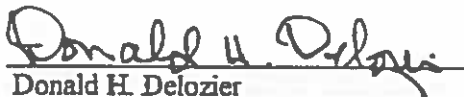
Date: 4.29-13

ATTORNEY FOR RESPONDENT


Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: April 30, 2013

FOR RESPONDENT:


Donald H. Delozier
Director, Meat and Poultry Inspection Division
North Carolina Department of Agriculture & Consumers Services

Date: April 30, 2013

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
Case No.: _____

PEDRO HERNANDEZ,
ZENAIDA HERNANDEZ,

Petitioners,

V.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, MEAT & POULTRY
INSPECTION DIVISION,

Respondent.

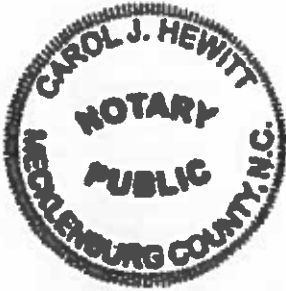
JUDGMENT


Defendants now depose and say that they are residents of Mecklenburg County, North Carolina, and authorizes the Court to enter judgment in favor of Plaintiff in the sum of fifty-four thousand dollars (\$54,000.00), with interest from _____, 2013.

Defendants may become liable to Plaintiff in this amount because they entered into a Settlement Agreement with Plaintiff on _____, 2013, to settle and resolve litigation of the case captioned Felicito Hernandez, Pedro Hernandez and Zenaida Hernandez v. N.C. Department of Agriculture and Consumer Services, case no. 12 DAG 07297, before the North Carolina Office of Administrative Hearings. Defendants brought that case against the Plaintiff to contest the Plaintiff's issuance of a civil penalty assessment against the Defendants for having operated an unlicensed, uninspected animal slaughter and processing facility in violation of the N.C. Mandatory Meat Inspection Law, and for improper disposal of a dead domesticated animal, upon discovering Defendants' use of Defendant Pedro Hernandez' property and buildings for those purposes on August 27, 2011.

The Parties resolved the matter before the N.C. Office of Administrative Hearings pursuant to the above-referenced Settlement Agreement, which is attached hereto and incorporated by reference. In said Settlement Agreement the Defendants promised to comply with the referenced statutes and regulations by rendering the property and buildings unsuitable for the slaughter and processing of animals for food. Defendants also agreed in said Settlement Agreement to execute this Judgment in favor of the Plaintiff. As full and fair consideration for said promises and actions, the parties agreed that the Plaintiff would not file and execute upon this Judgment unless and until it found that the Defendants, either individually or jointly, had violated the North Carolina Mandatory Meat Inspection laws or otherwise failed to comply with the terms and obligations of said Settlement agreement.

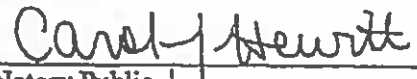
On _____, 20____, Plaintiff's officers discovered that _____ Defendant Felicito Hernandez or _____ Defendant Pedro Hernandez had failed to meet his obligations under said Settlement Agreement by committing the violations set forth in the report issued by the Plaintiff, which is attached hereto and incorporated by reference.




Defendant Pedro Hernandez


Defendant Felicito Hernandez

Sworn to and subscribed before
me this 29th day of April, 2013.


Notary Public

Upon the foregoing confession of judgment, IT IS THEREFORE ORDERED that judgment is entered for Plaintiff against Defendants in the sum of fifty-four thousand dollars (\$54,000.00), with interest to run from _____, 2013, together with the costs in the sum of \$ _____. Said judgment amount is reduced and Defendant is given credit for payment of the sum of \$ _____, which Plaintiff hereby acknowledges receipt of prior to filing of this Confession of Judgment.

This the _____ day of _____, 20____.

Clerk of Court



Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Meat and Poultry Inspection Division

Dr. Beth Yongue
State Director

February 19, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
1945 Dilling Farm Road
Charlotte, NC 28214

Mr. Felicito Phillip Hernandez
624 Trailing Rock Road
Charlotte, NC 28214

**RE: CIVIL PENALTY ASSESSMENT FOR VIOLATIONS
OF THE MEAT INSPECTION LAWS AND POULTRY PRODUCTS INSPECTION LAWS
G.S. § 106-549.17, 106-549.23 and 106-549.56.**

Dear Mr. Pedro Hernandez, Ms. Zenaida Hernandez, Mr. Felicito Phillip Hernandez,

Pursuant to North Carolina General Statute (G.S.) 106-549.35(c) and (G.S.) 106-549.59(a1) this letter is notice of a civil penalty by the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division (NCDA&CS). The civil penalty assessment document is attached.

Within 60 days from the date of receipt, you must do one of the following:

1. Pay the civil penalty assessment; or
2. File a written petition for a contested case hearing in the Office of Administrative Hearings appealing the penalty assessment.

Pursuant to G.S. §150B-22, informal settlement negotiations may be initiated at any time. To negotiate a settlement of this assessment, present your offer to Dr. Beth Yongue, Director, Meat & Poultry Inspection Division, who may be contacted by telephone at (919) 707-3180. Settlement offers do not extend the 60 day deadline for payment or filing of a contested case petition.

Additional information about your options is provided below:

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicitó Phillip Hernandez
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-PAYMENT-

To pay the penalty, please send your payment by check or money order made payable to the North Carolina Department of Agriculture and Consumer Services to:

North Carolina Department of Agriculture and Consumer Services
Dr. Beth Yongue, Director
Meat & Poultry Inspection Division
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

-APPEAL-

If you file a contested case petition, it must be in writing and in the form prescribed by G.S. § 150B-23. File the petition and one copy with:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, North Carolina 27699-1001

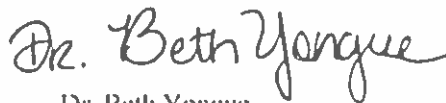
Any questions about filing a petition may be directed to the Clerk of OAH by telephone (919) 733-0926. You must serve NCDA&CS by mailing a copy of the petition to:

Ms. Tina Hlabse
North Carolina Department of Agriculture and Consumer Services
Process Agent and General Counsel
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

Payment of the penalty will not foreclose further enforcement action against you for any new violation. If the violations which resulted in the assessment are of a continuing nature, NCDA&CS reserves the right to assess additional civil penalties in the future or take other enforcement action against you.

Your attention to this matter is appreciated.

Sincerely,



Dr. Beth Yongue
Director, Meat & Poultry Inspection Division

MEY:dm

Attachments: Assessment Document

CC: Mr. Chris McLennan, Assistant Attorney General
Mr. Joe Reardon, Assistant Commissioner
Ms. Tina Hlabse, General Counsel

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicito Phillip Hernandez
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STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE & CONSUMER SERVICES
MEAT & POULTRY INSPECTION DIVISION

IN THE MATTER OF)

Mr. Pedro Hernandez)
Ms. Zenaida Hernandez)
Mr. Felicito Hernandez)

FOR VIOLATIONS OF THE N.C. COMPULSORY)
MEAT INSPECTION LAW AND N.C. POULTRY)
POULTRY PRODUCTS LAW)
G.S. § 106-549.17, § 106-549.23(1), § 106-549.23(3)(a))
§ 106-549.23(3)(b) & 106-549.56(a)(2))

NOTICE OF VIOLATIONS
AND ASSESSMENT OF
CIVIL PENALTY

Acting pursuant to North Carolina General Statute (G.S.) § 106-549.35(c), § 106-549.17, § 106-549.23(1), § 106-549.23(3)(a), § 106-549.23(3)(b) and § 106-549.56(a)(2) Dr. Beth Yongue, Director, Meat and Poultry Inspection Division of North Carolina Department of Agriculture and Consumer Services (NCDA&CS) makes the following:

I. FINDINGS OF FACTS:

- A. This investigation is a result of anonymous information received alleging that there was a non-inspected slaughter/processing operation being conducted at 1945 Dilling Farm Road, Charlotte, NC.
- B. On October 14, 2017, a confidential informant, while posing as a member of the general public, went to 1945 Dilling Farm Road, Charlotte, NC also known as Big H Farms, where an apparent non-inspected slaughter and processing operation appeared to be in full operation, without the benefit of NCDA (State) or USDA (Federal) inspection.
- C. After arriving at the property, the confidential informant, spoke with a farm employee and requested to purchase some goat meat. The farm employee then began removing the hair, from a goat that was killed prior to the confidential informant's arrival, by burning the hair off with a blowtorch. The employee then eviscerated the animal (goat carcass) and cut off approximately six (6) pounds of the goat meat (ribs and skin attached) and placed/packaged the goat meat into a small non-food grade plastic bag. The non-food grade plastic bag stated the following: "Have A Nice Day", "Thank You" and the bag contained a large yellow smiley face.
- D. On October 14, 2017, the confidential informant also observed a large bull carcass, the bull was killed prior to the confidential informant's arrival, hanging from a forklift. The confidential informant asked the farm employee if he could purchase approximately three (3) pounds of the beef meat.

- E. On October 14, 2017, the confidential informant, paid six (6) dollars per pound for the goat meat a total of \$36.00 and the informant paid \$10.00 for three (3) pounds of beef meat. The goat meat and beef meat came to a total of \$46.00.**
- F. The non-inspected, misbranded and/or adulterated meat products were transferred from the confidential informant to Compliance Officer Philip Renshaw (hereinafter, CO Renshaw, respectively) relevant to chain of custody proceedings.**
- G. Upon taking custody of the non-inspected, misbranded and/or adulterated meat products, CO Renshaw examined and photographed the contents and saw no NCDA (State) or USDA (Federal) marks of inspection and several signs of adulteration which included a speckled black substance and a small amount of hair on the non-inspected/misbranded goat meat.**
- H. CO Renshaw transferred the above mentioned non-inspected, misbranded and/or adulterated meat products to the MPID Raleigh Compliance Office, following the Division chain of custody procedures.**
- I. On October 28, 2017, the confidential informant, while posing as a member of the general public, visited the property of Big H Farms, 1945 Dilling Farm Road, Charlotte, NC 28214 for a second undercover purchase. At the time the confidential informant arrived on the property of Big H Farms there appeared to be a non-inspected slaughter and processing operation in full operation, without the benefit of NCDA (State) or USDA (Federal) inspection for the general public.**
- J. After arriving at the property, the confidential informant, observed a beef carcass hanging from the back of a tractor (this animal was slaughtered prior to the confidential informant's arrival), and spoke with a farm employee to purchase part of the animal's stomach.**
- K. After the confidential informant spoke with the farm employee, the employee of Big H Farms walked up to the beef carcass that was hanging from the tractor (that was slaughtered without the benefit of NCDA or USDA inspection) and cut out/removed part of the stomach from the eviscerated carcass. The viscera/stomach was lying on the concrete floor when the farm employee removed it for the confidential informant. The farm employee in-turn emptied the loose stomach digestive contents out the stomach, briefly sprayed it with a water hose (approximately 5 pounds of stomach) and then packaged it into a small non-food grade plastic bag. The non-food grade plastic bag stated the following: "Have A Nice Day", "Thank You" and the bag contained a large yellow smiley face.**
- L. On October 28, 2017, the confidential informant, was charged and paid \$20.00 for the non-inspected, misbranded and adulterated beef stomach.**

- M. The non-inspected, misbranded and/or adulterated meat products were transferred from the confidential informant to CO Renshaw relevant to chain of custody proceedings.
- N. Upon taking custody of the non-inspected, misbranded and/or adulterated meat products, CO Renshaw examined and photographed the contents and saw no NCDA (State) or USDA (Federal) marks of inspection and several signs of adulteration which included a large amount of fecal material and/or ingesta attached to the beef stomach. The confidential informant stated that the meat product had a strong off smell to it at the time the non-inspected, misbranded and adulterated beef stomach was placed into the non-food grade plastic bag.
- O. CO Renshaw transferred the above mentioned non-inspected, misbranded and/or adulterated meat products to the MPID Raleigh Compliance Office, following the Division chain of custody procedures.
- P. On January 20, 2018, NCDA & CS, MPID, Compliance Officer Philip Renshaw (hereinafter, CO Renshaw, respectively), Compliance Officer Jake Groce (hereinafter, CO Groce, respectively) and Compliance Officer Daniel Moody (hereinafter, CO Moody, respectively), along with members of the Mecklenburg County Sheriff's Office: Captain D. Belk, Sergeant G. Headon, Deputy A. Stitt, Deputy D. Frazier, Deputy N. Davie, Deputy E. Elmendorf, Deputy B. Daniels, Deputy D. Davis, Deputy G. Baker, Deputy C. Pettis, and Deputy R. Poe, executed an administrative inspection warrant at the property owned by Mr. Pedro Hernandez and Ms. Zenaida Hernandez, 1945 Dilling Farm Road, Charlotte, NC, on behalf of the North Carolina Department of Agriculture and Consumer Services to investigate the illegal slaughtering, processing and selling of misbranded, non-inspected and adulterated meat and poultry products to the general public.
- Q. During the announcement of the execution of the administrative inspection warrant, the son of the property owners, Mr. Felicito Phillip Hernandez, 624 Trailing Rock Dr., Charlotte, NC, stated that he was in charge of the non-inspected slaughtering and processing operation.
- R. Upon entering the property, CO's Renshaw, Groce and Moody observed, photographed and videoed the wooden buildings on the property and the live animals which consisted of: approximately fifteen (15) goats/lambs, eleven (11) cattle, ten (10) hogs, nine (9) rabbits, forty (40) pigeons/doves, two (2) turkeys, one (1) small calf, thirty (30) ducks, twenty (20) roosters and two hundred and twenty (220) chickens.
- S. On the property, there was an open-sided roof structure that contained a slaughter area. This slaughter area contained a stainless-steel table, a white metal bathtub with a propane tank and burner system attached to it. The bath tub was full of hot steaming water and in the past Big H Farms has used this tub as a scald vat for pigs.
- T. There was a holding pen directly attached to the slaughter area that contained ten (10) pigs/hogs which appeared to be waiting to be slaughtered.

- U. Attached to the slaughter area was a wooden building (20 ft x 20 ft., tan in color) which was being used for processing the slaughtered animals and storing the non-inspected meat and poultry products which were being offered for sale and sold to the general public. Inside the processing room there was one small meat grinder, two band saws, several fans (with heavy dust/debris), dozens of knives and steels, two stainless steel processing tables, a wheelbarrow, a water hose, a poultry plucker, a poultry scolding vat, household cleaning chemicals, a 22 rifle, one commercial cooler with three glass doors and one household refrigerator/freezer which all contained non-inspected, misbranded and/or adulterated meat (goat, sheep, pork and beef) products which were being stored and offered for sale to the public.
- V. When entering the wooden building where the processing operation was set up Big H Farms used the left side of the room for cleaning and processing poultry. This area contained a stainless-steel table, a poultry plucker, a stainless-steel sink, a poultry scolding vat, three (3) large plastic containers and the plastic containers were full of cleaned whole chickens (approximately three hundred ten (310) pounds). The poultry scolding vat was full of water and still steaming from previous use.
- W. On January 20, 2018, Mr. Phillip Hernandez was asked to produce documentation on the poultry that was slaughtered and processed earlier that day as noted in M.P.I.D. Notice 5-14. Mr. Hernandez stated that he did not maintain or have any records for the poultry that was slaughtered and processed earlier that day.
- X. Directly in front of the slaughter area and across a small gravel lot there is a cabin style structure (approximately 25ftX60ft) that contained three (3) large chest freezers. Inside the three (3) chest freezers were approximately one thousand (1,000) pounds of non-inspected, misbranded and adulterated beef meat and approximately one hundred (100) pounds of non-inspected, misbranded and adulterated pork meat. Inside the three (3) chest freezers the non-inspected, misbranded and adulterated meat products were encased in ice, had a freezer burned appearance and the meat products were stored in the freezers without any wrapping or protection to maintain the wholesomeness of the meat products.
- Y. On the back side of the cabin style structure there was a walk-in refrigerated truck body used as a walk-in cooler. The truck body had a heavy-duty gate (used on animal pastures) mounted to the ceiling and the non-inspected, misbranded and/or adulterated meat products were hanging on metal hooks from this heavy-duty gate. CO's Renshaw, Groce and Moody observed approximately ninety (90) pounds of goat meat, two hundred and sixty (260) pounds of pork meat and one thousand fifty (1,050) pounds of beef meat. The non-inspected, misbranded and/or adulterated meat products contained a speckled black substance, hair and fecal material.
- Z. CO's Renshaw, Groce and Moody estimated that approximately 3,120 pounds of non-inspected, misbranded (no NCDA or USDA mark of inspection or required labeling) and/or adulterated meat products were observed and NC Detained (Tag Numbers: 2930, 2932, 2937, 4390, 4391, 4402, 4403, 4404, 4405, 4415 and 4416), videoed and photographed.

- AA. CO's Renshaw, Groce and Moody examined the NC Detained non-inspected, misbranded and/or adulterated meat products and observed various meat products of goat/lamb, beef and pork that contained fecal material, hair, rust and a black substance directly on the meat products.
- BB. Inside the processing room was a meat band saw, a one compartment stainless steel sink with a water hose attached, plastic containers, several scales, one scalding water tank for processing chickens, a wood cutting block, a wood table, several knives and a metal cone used for slaughtering chickens.
- CC. Numerous unsanitary conditions and practices were observed by CO's Renshaw, Groce and Moody which led to the direct adulteration of the slaughtered and processed animals. These unsanitary conditions and practices included but were not limited to:
- a. the band saw contained meat particles from previous day(s) use;
 - b. blood, bones, hooves and horns were observed lying around the area from previous day(s) slaughter/processing activities;
 - c. the equipment, tables and buildings showed no signs of routine cleaning or sanitizing;
 - d. the processing table located next to the kill floor had a white cutting board on the top which was discolored and deeply scored with knife marks;
 - e. the stainless-steel processing table located next to the kill floor had a buildup of dried blood residues and hair, from the previous day(s) slaughter, on the surface area;
 - f. no device to sanitize knives was observed in the building;
 - g. the scald vat was a converted bathtub and had a buildup (black unidentified substance and hair) on the surface area from previous day(s) use;
 - h. a bag containing Kevlar gloves had heavy buildups (dirt, grime and meat particles) on the surface area from previous day(s) use and;
 - i. knives used for processing had buildup (dried blood residue and hair) on the surface area from the previous day(s) use.
- DD. On the south side grounds of the property, CO's Renshaw, Groce and Moody observed several acres of land where it appeared Mr. Hernandez had been digging to dispose of dead animals and offal (internal organs, heads and bones) generated by the non-inspected slaughter and processing facility.
- EE. On January 20, 2018, Mr. Phillip Hernandez was issued on-site cease and desist letters for the selling of non-inspected, misbranded and/or adulterated meat and poultry products.
- FF. On October 14, 2011, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez was found to be slaughtering (without the benefit of NCDA or USDA inspection) processing, storing, offering for sale and selling non-inspected, misbranded and adulterated meat products to the general public in violation of the North Carolina Compulsory Meat Inspection Law, General Statutes 106-549.17 and 106-549.23 and the North Carolina Poultry Products Inspection Laws, General Statutes § 106-549.56.

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicitto Phillip Hernandez
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GG. On June 21, 2012, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicitto Phillip Hernandez was issued a civil penalty of \$68,000.00 by the North Carolina Department of Agriculture and Consumer Services (NCDA&CS), Meat and Poultry Inspection Division (MPID) for the slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling of non-inspected, misbranded and/or adulterated meat products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17, § 106-549.23 and § 106-406 and the North Carolina Poultry Products Inspection Laws, General Statute § 106-549.53 and § 106-549.56.

CONCLUSIONS OF LAW

- A. Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicitto Hernandez are found to be slaughtering (without the benefit of NCDA (State) or USDA (Federal) inspection), processing, storing, offering for sale and selling non-inspected/misbranded and/or adulterated meat and poultry products to the general public and in addition, the unacceptable insanitary conditions at the location/facility were such that all products slaughtered (without the benefit of NCDA (State) or USDA (Federal) inspection), processed, stored, offered for sale and sold would be rendered adulterated in violation of General Statutes § 106-549.17, § 106-549.23 and § 106-549.56 and may be assessed a civil penalty of up to five thousand (\$5,000.00) dollars per violation under G.S. § 106-549.35(c) and under G.S. § 106-549.59 (a1).
- B. The Commissioner of Agriculture, pursuant to G.S. § 106-549.35(c) and G.S. § 106-549.59 (a1) has the authority to assess civil penalties in this matter. The authority has been delegated to Dr. Beth Yongue, Director, Meat and Poultry Inspection Division by the Commissioner of Agriculture pursuant to G.S. § 143B-10(a).

I. DECISION

As required by G.S. § 106-549.35(c) and G.S. § 106-549.59 (a1) and in determining the amount of the civil penalty, I have considered the degree and extent of harm caused by the violation of G.S. § 106-549.17, 106-549.23, 106-549.53 and 106-549.56.

Accordingly, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicitto Phillip Hernandez are assessed a civil penalty of:

(\$22,000.00) § 106-549.17.(a) - Inspection of Animals Before Slaughter
(\$22,000.00) § 106-549.23.(1) - Prohibited Slaughter
(\$22,000.00) § 106-549.23.(3)(a) - Prohibited Sale (Misbranded)
(\$22,000.00) § 106-549.23.(3)(b) - Articles Required to be Inspected
(\$22,000.00) § 106-549.23.(3)(a) - Prohibited Sale (Adulterated)
(\$2,000.00) § 106-549.56.(a)(2) - Prohibited Act (Misbranded)

\$112,000.00 for violating General Statute § 106-549.17, § 106-549.23, § 106-549.53 and § 106-549.56.
\$112,000.00 TOTAL AMOUNT ASSESSED.

February 19, 2018 Dr. Beth Yongue
Date Dr. Beth Yongue, Director
Meat and Poultry Inspection Division



Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Meat and Poultry Inspection Division

Dr. Beth Yongue
State Director

April 3, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
1945 Dilling Farm Road
Charlotte, NC 28214

Mr. Felicito Phillip Hernandez
624 Trailing Rock Road
Charlotte, NC 28214

**RE: CIVIL PENALTY ASSESSMENT FOR VIOLATIONS
OF THE MEAT INSPECTION LAWS AND POULTRY PRODUCTS INSPECTION LAWS
GENERAL STATUTES § 106-549.17 and 106-549.23.**

Dear Mr. Pedro Hernandez, Ms. Zenaida Hernandez, Mr. Felicito Phillip Hernandez

Pursuant to North Carolina General Statutes (G.S.) 106-549.35(c) and (G.S.) 106-549.59(a1) this letter is notice of a civil penalty by the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division (NCDA&CS). The civil penalty assessment document is attached.

Within 60 days from the date of receipt, you must do one of the following:

1. Pay the civil penalty assessment; or
2. File a written petition for a contested case hearing in the Office of Administrative Hearings appealing the penalty assessment.

Pursuant to General Statutes §150B-22, informal settlement negotiations may be initiated at any time. To negotiate a settlement of this assessment, present your offer to Dr. Beth Yongue, Director, Meat & Poultry Inspection Division, who may be contacted by telephone at (919) 707-3180. Settlement offers do not extend the 60-day deadline for payment or filing of a contested case petition.

Additional information about your options is provided below:

1001 Mail Service Center, Raleigh, North Carolina 27689-1001 • (919) 733-4136
Toll Free Hearing Impaired: 1-800-735-2962 • Toll Free Speech Impaired: 1-877-735-8200
www.ncagr.com/meatpoultry
Equal Opportunity in Employment and Services

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicito Phillip Hernandez
Page 2

-PAYMENT-

To pay the penalty, please send your payment by check or money order made payable to the North Carolina Department of Agriculture and Consumer Services to:

North Carolina Department of Agriculture and Consumer Services
Dr. Beth Yongue, Director
Meat & Poultry Inspection Division
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

-APPEAL-

If you file a contested case petition, it must be in writing and in the form prescribed by G.S. § 150B-23. File the petition and one copy with:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, North Carolina 27699-1001

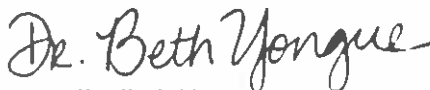
Any questions about filing a petition may be directed to the Clerk of OAH by telephone (919) 733-0926. You must serve NCDA&CS by mailing a copy of the petition to:

Ms. Tina Hlabse
North Carolina Department of Agriculture and Consumer Services
Process Agent and General Counsel
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

Payment of the penalty will not foreclose further enforcement action against you for any new violation. If the violations which resulted in the assessment are of a continuing nature, NCDA&CS reserves the right to assess additional civil penalties in the future or take other enforcement action against you.

Your attention to this matter is appreciated.

Sincerely,



Dr. Beth Yongue
Director, Meat & Poultry Inspection Division

MEY:dm

Attachments: Assessment Document
CC: Mr. Chris McLennan, Assistant Attorney General
Mr. Joe Reardon, Assistant Commissioner
Ms. Tina Hlabse, General Counsel

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicito Phillip Hernandez
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STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE & CONSUMER SERVICES
MEAT & POULTRY INSPECTION DIVISION

IN THE MATTER OF)

Mr. Pedro Hernandez)
Ms. Zenaida Hernandez)
Mr. Felicito Hernandez)

FOR VIOLATIONS OF THE N.C. COMPULSORY)
MEAT INSPECTION LAW AND N.C. POULTRY)
POULTRY PRODUCTS LAW)
G.S. § 106-549.17, § 106-549.23(1), § 106-549.23(3)(a))
§ 106-549.23(3)(a) & § 106-549.23(3)(b))

NOTICE OF VIOLATIONS
AND ASSESSMENT OF
CIVIL PENALTY

Acting pursuant to North Carolina General Statute (G.S.) § 106-549.35(c), § 106-549.17, § 106-549.23(1), § 106-549.23(3)(a), § 106-549.23(3)(a) & § 106-549.23(3)(b). Dr. Beth Yongue, Director, Meat and Poultry Inspection Division of North Carolina Department of Agriculture and Consumer Services (NCDA&CS) makes the following:

I. FINDINGS OF FACTS:

- A. This investigation is a result of anonymous information received on February 12, 2018, at the North Carolina Department of Agriculture & Consumer Services, Meat and Poultry Inspection Division, Raleigh Office alleging that there was a non-inspected slaughter and processing operation being conducted at Big H Farms, 1945 Dilling Farm Road, Charlotte, North Carolina.
- B. On February 17, 2018, a confidential informant, while posing as a member of the general public, went to 1945 Dilling Farm Road, Charlotte, North Carolina also known as Big H Farms, where an apparent non-inspected slaughter and processing operation appeared to be in full operation, without the benefit of NCDA (State) or USDA (Federal) inspection.
- C. After arriving at the property, the confidential informant, spoke with a farm employee and requested to purchase some beef meat. The farm employee told the confidential informant to go to another section of the farm (the restaurant style building area) where he observed a small amount of non-inspected, misbranded and/or adulterated beef meat being stored, offered for sale and sold to the general public. Also, while the confidential informant was waiting, he observed a partially visible beef carcass that was hanging behind a plastic style partition (this animal was slaughtered prior to the confidential informant's arrival).

- D. A farm employee then packaged approximately five (5) pounds of the beef meat into a small non-food grade plastic bag. The non-food grade plastic bag stated the following: "Have A Nice Day", "Thank You Gracias".
- E. On February 17, 2018, the confidential informant, paid six (6) dollars per pound for the beef meat a total of \$30.00.
- F. The non-inspected, misbranded and/or adulterated meat products were transferred from the confidential informant to Compliance Officer Philip Renshaw (hereinafter, CO Renshaw, respectively) relevant to chain of custody proceedings.
- G. Upon taking custody of the non-inspected, misbranded and/or adulterated meat products, CO Renshaw examined and photographed the contents and saw no NCDA (State) or USDA (Federal) marks of inspection or required labeling on the meat products or packaging.
- H. CO Renshaw transferred the above mentioned non-inspected, misbranded and/or adulterated meat products to the MPID Raleigh Compliance Office, following the Division chain of custody proceedings.
- I. Big H Farms (1945 Dilling Farm Road, Charlotte, North Carolina) owned/operated by Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez, does not operate under County, State (NCDA) or Federal (USDA) inspection.
- J. On October 14, 2011, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez were found to be slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling non-inspected, misbranded and/or adulterated meat products and poultry products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17 and § 106-549.23 and the North Carolina Poultry Products Inspection Laws, General Statute § 106-549.56.
- K. On June 21, 2012, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez were issued a civil penalty of \$68,000.00, later settled for \$54,000.00, by the North Carolina Department of Agriculture & Consumer Services (NCDA&CS), Meat and Poultry Inspection Division (MPID) for the slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling of non-inspected, misbranded and/or adulterated meat products and poultry products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17, § 106-549.23 and § 106-406 and the North Carolina Poultry Products Inspection Laws, General Statutes § 106-549.53 and § 106-549.56.

- L. On January 20, 2018, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez were found to be slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling non-inspected, misbranded and/or adulterated meat products and misbranded poultry products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17 and § 106-549.23 and the North Carolina Poultry Products Inspection Laws, General Statute § 106-549.56.
- M. On February 19, 2018, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez were issued a civil penalty of \$112,000.00 by the North Carolina Department of Agriculture & Consumer Services (NCDA&CS), Meat and Poultry Inspection Division (MPID) for the slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling of non-inspected, misbranded and/or adulterated meat products and misbranded poultry products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17, and § 106-549.23 and the North Carolina Poultry Products Inspection Laws, General Statute § 106-549.56.

II. CONCLUSIONS OF LAW

- A. Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Hernandez are found to be slaughtering (without the benefit of NCDA (State) or USDA (Federal) inspection), processing, storing, offering for sale and selling non-inspected, misbranded and/or adulterated meat products to the general public and in addition, the unacceptable insanitary conditions at the location/facility were such that all products slaughtered (without the benefit of NCDA (State) or USDA (Federal) inspection), processed, stored, offered for sale and sold would be rendered adulterated in violation of General Statutes § 106-549.17 and § 106-549.23 and may be assessed a civil penalty of up to five thousand (\$5,000.00) dollars per violation under General Statute § 106-549.35(c) and under General Statute § 106-549.59 (a1).
- B. The Commissioner of Agriculture, pursuant to General Statute § 106-549.35(c) and General Statute § 106-549.59 (a1) has the authority to assess civil penalties in this matter. The authority has been delegated to Dr. Beth Yongue, Director, Meat and Poultry Inspection Division by the Commissioner of Agriculture pursuant to General Statute § 143B-10(a).

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicito Phillip Hernandez
Page 6

III. DECISION

As required by General Statute §106-549.35(c) and General Statute §106-549.59 (a1) and in determining the amount of the civil penalty, I have considered the degree and extent of harm caused by the violation of General Statutes § 106-549.17 and §106-549.23.

Accordingly, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez are assessed a civil penalty of:

(\$5,000.00) §106-549.17.(a) - Inspection of Animals Before Slaughter
(\$5,000.00) §106-549.23.(1) - Prohibited Slaughter
(\$5,000.00) §106-549.23.(3)(a) - Prohibited Sale (Misbranded)
(\$5,000.00) §106-549.23.(3)(b) - Articles Required to be Inspected
(\$5,000.00) §106-549.23.(3)(a) - Prohibited Sale (Adulterated)

\$25,000.00 for violating General Statutes §106-549.17, §106-549.23(1), §106-549.23(3)(a), §106-549.23(3)(b) & §106-549.23(3)(a).

\$25,000.00 TOTAL AMOUNT ASSESSED.

Date

April 3, 2018

Dr. Beth Yongue

Dr. Beth Yongue, Director
Meat and Poultry Inspection Division

APPENDIX D

STATE OF NORTH CAROLINA
COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
__ CVS __

**NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND
CONSUMER SERVICES, MEAT AND
POULTRY INSPECTION DIVISION,**

Plaintiff,

v.

FELICITO HERNANDEZ,

Defendant.

**STATEMENT AUTHORIZING
CONFESSION OF JUDGMENT**

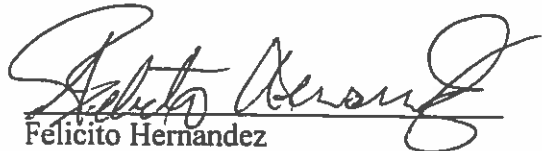
Felicitito Hernandez, acting pursuant to Rule 68.1 of the North Carolina Rules of Civil Procedure, and having been duly sworn, hereby deposes and says:

1. Felicitito Hernandez is the Defendant in this matter and is a resident of Mecklenburg County, North Carolina.
2. Plaintiff is the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division, which is an agency of the State of North Carolina organized pursuant to Chapter 106 of North Carolina General Statutes and headquartered in Wake County, North Carolina. By statute, Plaintiff is tasked by law with enforcing North Carolina Meat Inspection Law and Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes).
3. Defendant hereby confesses judgment in favor of Plaintiff and authorizes this Court to enter judgment against Defendant and in favor of Plaintiff in the amount of Sixty One Thousand Dollars (\$61,000.00), less any payments made, plus costs and interest at the State's legal rate from the date of entry of this judgment until paid in full.
4. This confession of judgment is for an amount justly owed and Defendant is liable to Plaintiff in this amount pursuant to a Settlement Agreement lawfully entered into by the parties. In said Settlement Agreement, which is attached hereto and incorporated herein by reference, the parties agreed to resolve a dispute regarding an alleged violation of North Carolina Meat Inspection and Poultry Products Laws. As part of the consideration exchanged in the Settlement Agreement, Defendant agreed to pay Plaintiff and execute this confession of judgment in favor of Plaintiff in the amount of Sixty One Thousand Dollars (\$61,000.00).

VERIFICATION

Felicitto Hernandez, being first duly sworn, deposes and says:

He has read the foregoing Confession of Judgment and the statements contained therein are true of his own knowledge, except for those matters and things stated therein upon information and belief, and as to those things, he believes them to be true.



Felicitto Hernandez
624 Trailing Rock Road
Charlotte, North Carolina 28214

Subscribed and sworn to before me this day by Felicitto Hernandez.

This the 24 day of July, 2018.


Signature of Notary Public

Sharon A. Gregory
Printed Name of Notary Public

My commission expires: 10/22/22



STATE OF NORTH CAROLINA

COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION

__ CVS __

**NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND
CONSUMER SERVICES,
STRUCTURAL PEST CONTROL
AND PESTICIDES DIVISION,**

Plaintiff,

v.

FELICITO HERNANDEZ,

Defendant.

JUDGMENT

Upon the foregoing confession of judgment, IT IS THEREFORE ORDERED that judgment is entered for Plaintiff against Defendant in the sum of _____, with credit for previous payments made by Defendant as reflected below, with interest, to run at the State's legal rate on the unpaid balance from - _____, 201__, together with costs in the sum of \$ _____. Defendant is given credit for payment of the sum of \$ _____, which Plaintiff hereby acknowledges receipt of prior to filing of this Confession of Judgment.

This the ____ day of _____, 201__.

Clerk of Superior Court



Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Meat and Poultry Inspection Division

Dr. Beth Yongue
State Director

MPID Notice 6-14 (Revision 2)

September 17, 2014

REQUIREMENTS FOR THE PRODUCER/GROWER 20,000 POULTRY EXEMPTION

I. **PURPOSE:** This notice provides instructions for individuals slaughtering and/or processing up to 20,000 poultry of their own raising as a Producer/Grower under exemption from mandatory (daily) inspection requirements of the Poultry Products Inspection Act and the NC Poultry Products Inspection Law. All poultry products produced under these exemptions can only be sold within the state of North Carolina.

II. **CANCELLATION:** MPID Notice 15-12, dated 9-17-12

III. **REASON FOR REISSUANCE:** To provide specialty claims labeling requirements in relationship to exempt poultry products.

IV. **DEFINITIONS:**

Poultry: "Poultry" means any of the following domesticated birds: chickens, turkeys, ducks, geese, guineas, ratites, and squabs.

Processing: Allowable "processing activities" under this exemption are limited to minimal processing of the raw dressed poultry which includes the following: cutting and trimming of whole dressed raw birds into halves, quarters, or other individual pieces or parts, grinding, stuffing and/or adding seasonings to the raw exempt poultry and wrapping, bagging, packaging and labeling of the exempt poultry products.

V. **REFERENCES:** 9 CFR 381.10; NC General Statute 106-549.62

VI. **PROCEDURE:**

Producer/Grower 20,000 Poultry Limit Exemption

A person may slaughter and process (on his or her premises) poultry that he/she raised and he/she may distribute such poultry without mandatory (daily) inspection. The limited provisions of this exemption apply to poultry growers who slaughter/process no more than 20,000 birds in a calendar year for use as human food. To operate under this exemption the noted nine (9) requirements must be met.

1. The producer/grower slaughters/processes no more than 20,000 healthy birds of his/her own raising, on his/her premises in a calendar year.

2. The producer/grower sells/distributes only poultry products he/she prepares under the Producer/Grower 20,000 Poultry Limit Exemption. He/she may not buy or sell poultry products prepared under another exemption in the same calendar year.

3. The poultry products can be sold only within the state of North Carolina. The poultry products may not move in interstate commerce.

4. The poultry are healthy when slaughtered.

5. The slaughter and processing at the Producer/Grower's premises is conducted under sanitary standards, practices, and procedures that produce products that are sound, clean, fit for human food and not adulterated. Sanitation requirements are outlined in Attachment 1: Basic Sanitary Standards
6. The Producer/Grower only distributes poultry products he/she produced under the Poultry/Grower Exemption. General Note: The producer/grower can also distribute poultry products that he/she raised and had slaughtered/processed under USDA inspection.
7. With the exception of mobile slaughter units, the facility used to slaughter or process the poultry is not used to slaughter or process another person's poultry unless the State Director of Meat and Poultry Inspection grants an exemption.
8. All poultry or poultry products produced under this exemption must be labeled with the following:
 - a. the processor's name,
 - b. the address,
 - c. the statement, Exempt P.L. 90-492,
 - d. Safe Handling Instructions

See Attachment 2 for an example of a "Safe Handling Instructions" label.

Specialty claims such as "local," "free range," "raised without antibiotics," and other descriptive terms are not permitted on the labels of exempt poultry products or associated point of purchase materials (posters, brochures, etc). If poultry producers desire to make any claims about their poultry products, such poultry must be slaughtered and processed at a USDA inspected poultry slaughter establishment. Claims must be pre-approved per MPID Notice 10-09 Labeling and Point of Purchase Claims.

9. The Producer/Grower keeps accurate and legible records necessary for the effective enforcement of the Act. Records include slaughter records and records covering the sales of poultry products to customers. These records are subject to review by USDA Food Safety and Inspection Service or NCDA&CS Meat and Poultry Inspection Division employees, to determine compliance with the requirement for sales not to exceed 20,000 poultry in a calendar year.

Additional 20,000 Poultry Limit Exemptions

Two additional possible exemptions fall in this category. They are Producer, Grower or Other Person and Small Enterprise. Exemption criteria requirements differ for each exemption and are complex. Sales and processing activities are limited under these two exemptions. A slaughter or processor of poultry may not simultaneously operate under more than one exemption during a calendar year. For more information on these two additional specific exemptions, contact the NCDA&CS Meat and Poultry Inspection Division.

ADDITIONAL INFORMATION: If you have any questions or need additional information, contact the NCDA&CS Meat and Poultry Inspection Division at (919) 707-3180.

Attachment 1: Basic Sanitary Standards

Attachment 2: "Safe Handling Instructions" Label Example

Dr. Beth Yongue
State Director

DISTRIBUTION:
Poultry Exempt Operators,
MPID Field Personnel

SUBJECT CATEGORY:
Compliance

Attachment 1: Basic Sanitary Standards

Following are general basic sanitary standards, practices, and procedures [9 CFR 416.2-416.5]. The list is a summary of the regulatory requirements for sanitation procedures and practices that are required for a poultry business receiving full U.S. Department of Agriculture inspection and are applicable to poultry exempt operations {Title 9 CFR Part 416}.

A. Sanitary operating conditions. All food-contact surfaces and non-food-contact surfaces of an exempt facility are cleaned and sanitized as frequently as necessary to prevent the creation of insanitary conditions and the adulteration of product. Cleaning compounds, sanitizing agents, processing aids, and other chemicals used by an exempt facility are safe and effective under the conditions of use. Such chemicals are used, handled, and stored in a manner that will not adulterate product or create insanitary conditions. Documentation substantiating the safety of a chemical's use in a food processing environment is available to inspection program employees for review. Product is protected from adulteration during processing, handling, storage, loading, and unloading and during transportation from official establishments.

B. Grounds and pest control. The grounds of exempt operation are maintained to prevent conditions that could lead to insanitary conditions or adulteration of product. Plant operators have in place a pest management program to prevent the harborage and breeding of pests on the grounds and within the facilities. The operator's pest control operation is capable of preventing product adulteration. Management makes every effort to prevent entry of rodents, insects, or animals into areas where products are handled, processed, or stored. Openings (doors and windows) leading to the outside or to areas holding inedible product have effective closures and completely fill the openings. Areas inside and outside the facility are maintained to prevent harborage of rodents and insects. The pest control substances used are safe and effective under the conditions of use and are not applied or stored in a manner that will result in the adulteration of product or the creation of insanitary conditions.

C. Sewage and waste disposal. Sewage and waste disposal systems properly remove sewage and waste materials—feces, feathers, trash, garbage, and paper—from the facility. Sewage is disposed of into a sewage system separate from all other drainage lines or disposed of through other means sufficient to prevent backup of sewage into areas where product is processed, handled, or stored. When the sewage disposal system is a private system requiring approval by a State or local health authority, upon request, the management must furnish to the inspector a letter of approval from that authority.

D. Water supply and water, ice, and solution reuse. A supply of running water that complies with the National Primary Drinking Water regulations (40 CFR part 141) at a suitable temperature and under pressure as needed, is provided in all areas where required (for processing product; for cleaning rooms and equipment, utensils, and packaging materials; for employee sanitary facilities, etc.). If a facility uses a municipal water supply, it must make available to the inspector, upon request, a water report, issued under the authority of the State or local health agency, certifying or attesting to the potability of the water supply. If a facility uses a private well for its water supply, it must make available to the inspector, upon request, documentation certifying the potability of the water supply that has been renewed at least semi-annually.

E. Facilities. Maintenance of facilities during slaughtering and processing is accomplished in a manner to ensure the production of wholesome, unadulterated product.

F. Dressing rooms, lavatories, and toilets. Dressing rooms, toilet rooms, and urinals are sufficient in number ample in size, conveniently located, and maintained in a sanitary condition and in good repair at all times to ensure cleanliness of all persons handling any product. Dressing rooms, lavatories, and toilets are separate from the rooms and compartments in which products are processed, stored, or handled.

G. Inedible Material Control. The operator handles and maintains inedible material in a manner that prevents the diversion of inedible animal products into human food channels and prevents the adulteration of human food.

Attachment 2: Safe Handling Instructions Label Example

Safe Handling Instructions

Some food products may contain bacteria that could cause illness if the product is mishandled or cooked improperly. For your protection, follow these safe handling instructions.



Keep refrigerated or frozen. Thaw in refrigerator or microwave.



Keep raw meat and poultry separate from other foods. Wash working surfaces (including cutting boards), utensils, and hand after touching raw meat or poultry.



Cook thoroughly.



Keep hot foods hot. Refrigerate leftovers immediately or discard.

STATE OF NORTH CAROLINA
COUNTY OF BRUNSWICK

IN THE OFFICE OF
ADMINISTRATIVE HEARINGS
16 DAG 10023

RD WHITE & SONS INC. ROBERT H
WHITE,

Petitioner,

v.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, STANDARDS DIVISION,

Respondent.

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. 150B-22 and 150B-41(c), which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, this agreement (the "Agreement") is made and entered into by and between Respondent, the North Carolina Department of Agriculture and Consumer Services, Standards Division (hereinafter the "NCDA&CS"), and Petitioner, R.D. White & Sons, Inc. and Robert H. White (hereinafter "Petitioner"), effective as of the date reflected by the Notary Public for the signature of Stephen Benjamin, Director of the Standards Division, appearing on page 5 of this Agreement.

RECITALS

WHEREAS, Robert H. White is the owner and operator of R.D. White & Sons, Inc. located at 4737 Main Street, Shallotte, Brunswick County, North Carolina 28470;

WHEREAS, at all times pertinent to this matter, Petitioner owned and as was responsible for the underground liquefied petroleum gas tank (herein after the "LP-Gas tank") at the residential property located at 150 East First Street, Ocean Isle Beach, Brunswick County, North Carolina 28469 (hereinafter the "Residence");

WHEREAS, on May 3, 2016, NCDA&CS issued Petitioner a civil penalty in the amount of Five Hundred Dollars (\$500.00) for alleged violations of North Carolina LP-Gas Laws and rules observed on the LP-Gas tank at the Residence;

WHEREAS, Petitioner did not appeal the May 3, 2016 civil penalty and that penalty has become final;

WHEREAS, on September 29, 2016, NCDA&CS issued Petitioner a civil penalty in the amount of Eight Hundred Dollars (\$800.00) for alleged violations of North Carolina LP-Gas Laws and rules observed on the LP-Gas tank at the Residence;

WHEREAS, Petitioner timely appealed the September 29, 2016 civil penalty by filing a Petition for a Contested Case Hearing with the North Carolina Office of Administrative Hearings (16 DAG 10023);

WHEREAS, Petitioner disputes certain aspects of the May 3, 2016 and September 29, 2016 civil penalties;

WHEREAS, NCDA&CS and Petitioner desire to fully and finally compromise and settle all disputes and controversies between them involving or arising out the May 3, 2016 and September 29, 2016 civil penalties;

WHEREAS, NCDA&CS and Petitioner desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of litigation.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, NCDA&CS and Petitioner agree as follows:

1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by reference as if fully set forth herein.

2. By his signature below, Petitioner agrees to pay the sum of Three Hundred and Fifty Dollars (\$350.00) to NCDA&CS within thirty (30) days of the effective date of this Agreement.

a. Petitioner's payments will be mailed addressed as follows:

Standards Division
North Carolina Department of Agriculture and Consumer Services
Attention: Stephen Benjamin, Director Standards Division
1050 Mail Service Center
Raleigh, North Carolina 27699-1050

b. Petitioner's payment shall be considered to have been paid on time if Petitioner sends the payment by U.S. Postal Service First Class Mail, or other commercial carrier, prepaid, and the envelope is postmarked on or before the date when the payment is due.

3. By his signature below, Petitioner further agrees to fully remove the LP-Gas tank from the Residence within thirty (30) days of the effective date of this Agreement. Removal shall mean digging up the LP-Gas tank that is currently installed at the Residence and physically removing it from the Residence. Petitioner acknowledges and agrees that if he fails to remove the LP-Gas tank from the Residence as required by this Agreement, the original amounts assessed in the May 3, 2016 and September 29, 2016 civil penalties will become automatically due in full to NCDA&CS.

4. By his signature below, Petitioner further agrees to voluntarily dismiss his appeal of the September 29, 2016 civil penalty (16 DAG 10023) with prejudice.

5. By its representative's signature below, NCDA&CS agrees that, upon Petitioner's removal of the LP-Gas tank from the Residence, the alleged violations of North Carolina LP-Gas law and rules noted in the May 3, 2016 and September 29, 2016 civil penalties will be remedied and NCDA&CS will waive any remaining amounts due or potentially due as a result of the May 3, 2016 and September 29, 2016 civil penalties.

6. An action to recover any amount under this Agreement shall not relieve any party from any other penalty permitted by law.

7. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referenced in this Agreement.

8. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

9. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

10. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed and signed by all signatories hereto.

11. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor or against any party based upon which party drafted or participated in drafting this Agreement.

12. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

Agreement continues on the follow pages.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and signed as of the day and year indicated by their signatures below.

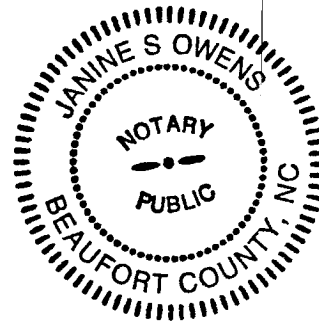
NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
STANDARDS DIVISION

By: Stephen Benjamin
Stephen Benjamin
Director, Standards Division
NCDA&CS

Subscribed and sworn to before me ²⁰¹⁷
this the 5th day of April, 2016.

Janine S. Owens
Notary Public

My Commission Expires: 3/16/2019



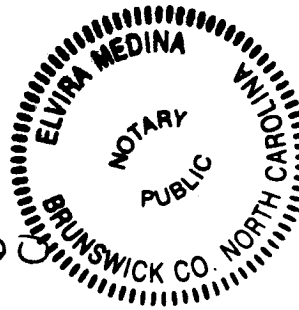
PETITIONER

By: Robert H. White
Robert H. White
R.D. White & Sons, Inc.
4737 Main Street,
Shallotte, North Carolina 28470

Subscribed and sworn to before me ¹⁷
this the 30 day of March, 2016.

Elvira Medina
Notary Public

My Commission Expires: July 13, 2020



STATE OF NORTH CAROLINA
COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, FOOD AND DRUG
PROTECTION DIVISION

IN THE MATTER OF
RANCH PHARMACY, LLC

CIVIL PENALTY ASSESSMENT,
ISSUED SEPTEMBER 13, 2016

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. 150B-22 and 150B-41(c), which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, this agreement (the "Agreement") is made and entered into on the date reflected opposite the signature of Jeremy Evans, Drug Administrator, appearing below on page 4, by and between the North Carolina Department of Agriculture and Consumer Services, Food and Drug Protection Division (hereinafter the "Department") and Ranch Pharmacy, LLC, 10769 N. Frank Lloyd Wright Blvd., Suite A-100, Scottsdale, Arizona (hereinafter "Ranch Pharmacy, LLC").

RECITALS:

WHEREAS, the Department received information from the North Carolina Board of Pharmacy documenting that non-controlled prescription drug products in sealed and unsealed containers were shipped from Ranch Pharmacy, LLC, 10769 N. Frank Lloyd Wright Blvd., Suite A-100, Scottsdale, AZ to retail pharmacies located in North Carolina.

WHEREAS, the Department's investigation confirmed that Ranch Pharmacy, LLC engaged in the wholesale distribution of prescription drugs in the State of North Carolina during 2014 and 2015.

WHEREAS, the Department has no records indicating that Ranch Pharmacy, LLC has applied for or obtained a license from the NCDA&CS to engage in the wholesale distribution of prescription drugs within this state as required by NCGS §106-145.3, either by registration or reciprocity with the state of Arizona.

WHEREAS, on September 13, 2016, the Department assessed Ranch Pharmacy, LLC a civil penalty of One Thousand Dollars (\$1,000.00) for violating N.C. General Statute § 106-145.3.

WHEREAS, as a result of settlement conversations and in an effort to resolve this matter to avoid the burden and expense of litigation, the Department and Ranch Pharmacy, LLC desire to fully and finally compromise and settle any and all disputes and controversies arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, the Department and Ranch

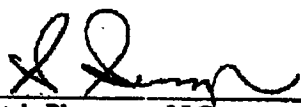
Pharmacy, LLC agree as follows:


1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by reference as if fully set forth herein.
2. Ranch Pharmacy, LLC agrees that, as of the effective date of this Agreement, Ranch Pharmacy, LLC, its officers, employees, agents, and assigns shall not engage in the distribution of prescription drugs into the State of North Carolina or participate in interstate commerce without being issued a wholesale distributor license to conduct business within the State of North Carolina.
3. As evidence of good faith and as consideration for this Agreement, the Department agrees that, as of the effective date of this Agreement, the Department shall release Ranch Pharmacy, LLC from any and all liability arising out of the September 13, 2016 civil penalty.
4. Any such distribution of prescription drugs by Ranch Pharmacy, LLC, its officers, employees, agents, or assigns as prohibited in Paragraph 2 above shall be considered a breach of this Agreement and allow the Division to seek all available legal remedies.
5. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.
6. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referenced in this Agreement.
7. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.
8. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.
9. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed and signed by all signatories hereto.
10. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor or against any party based upon which party drafted or participated in drafting this Agreement.
11. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and this Agreement shall be construed and enforced as if any such invalid


- or unenforceable provision(s) had not be including in the Agreement.
12. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
 13. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations and agreements are merged in this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.
 14. The parties attest that this Settlement Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.


Agreement continues on the follow pages.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:


Ranch Pharmacy, LLC
by 11-3-16
DATE


(print name of individual signing
on behalf of Ranch Pharmacy, LLC)


Jeremy Evans, Drug Administrator
NCDA&CS Food and Drug Protection Division
1001 Mail Service Center
Raleigh, NC 27699-1614
11-4-16
DATE


Christopher R. McLennan
Assistant Attorney General
N. C. Department of Justice
PO BOX 629
Raleigh, NC 27602-0629
11-4-16
DATE

STATE OF NORTH CAROLINA

COUNTY OF LENOIR

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, DIVISION OF SOIL AND
WATER CONSERVATION

IN THE MATTER OF RANDY SMITH;

COST SHARE CONTRACT NO. 54 09 08 09

SETTLEMENT AGREEMENT

RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of Patricia K. Harris, appearing below on page 3, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter, "Department") and Randy Smith (hereinafter "Mr. Smith").

WITNESSETH:

WHEREAS, on June 8, 2009 Mr. Randy Smith entered into a cost share contract agreement with the Division of Soil and Water Conservation ("DSWC") bearing contract number 54 09 08 09 (hereinafter the "agreement") for the purchase and installation of an underground irrigation system. The Department's Division of Soil and Water Conservation (hereinafter, "DWSC") approved this agreement and paid Mr. Smith the sum of six thousand five hundred and thirty one dollars (\$6,531.00) for the purchase and installation of an underground irrigation system.

WHEREAS, DWSC subsequently determined that it had approved the agreement erroneously upon finding that irrigation systems are not an approved for cost share funds according to North Carolina Soil and Water Commission Policy and therefore, it was not authorized to enter into the agreement or pay the aforementioned funds to Mr. Smith.

WHEREAS, the Department has requested that Mr. Smith refund the sum of money paid to him without authority. The Department and Mr. Smith desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above described claim and dispute.

NOW, THEREFORE, IT IS RESOLVED that, in consideration of Mr. Smith's promise to pay to the Department the sum of Six Thousand Five Hundred Thirty-One Dollars (\$6,531.00) in twelve equal monthly payments of \$544.25, according to the terms set forth below, and Department hereby agrees to release Mr. Smith from any and all liability arising out of the dispute upon receipt of the final payment, and for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Mr. Smith shall pay the sum stated above in twelve equal payments of \$544.25. Each payment shall be due and payable on the first of the month, **with the first payment due on December 1, 2014.** The Department shall deem Mr. Smith's monthly payment as being received timely if Mr. Smith sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the first day of the month in which that payment is due, properly addressed to Janine Owens, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.

2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Smith agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.

3. The Department hereby agrees that, so long as Mr. Smith complies with the terms of this Settlement Agreement, the Department shall forbear from bringing a civil action against Mr. Smith to collect the sum of money he received under the above-mentioned agreement, and shall forbear from filing the Confession of Judgment Mr. Smith has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, Appendix I, only if Mr. Smith fails to make a monthly payment on time, after giving Mr. Smith notice, by telephone call and e mail message of his failure to make said payment, and after allowing Mr. Smith three business days to cure his breach by paying the amount due in full.

4. The Department further agrees that, once Mr. Smith has paid his final monthly payment and Department has received Six Thousand Five Hundred Thirty-One dollars (\$6,531.00) in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Smith a document confirming receipt of payment and releasing Mr. Smith from further liability on this agreement and account. Further, the Department shall provide Mr. Smith with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Smith's breach of this Settlement Agreement.

5. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability

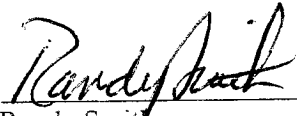
6. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.

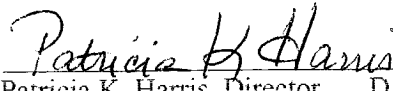
7. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations and agreements are merged in this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties

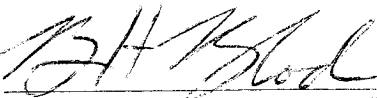
8. The parties attest that this Settlement Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.

9. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:

 11/25/2014
DATE
Randy Smith
496 PA Nobles Store Road
Deep Run, NC 28525

 12/11/2014
DATE
Patricia K. Harris, Director
NCDA & CS Division of Soil and Water
Conservation
1614 Mail Service Center
Raleigh, NC 27699-1614

 12/10/2014
DATE
Barry H. Bloch
Assistant Attorney General
N. C. Department of Justice
PO BOX 629
Raleigh, NC 27602-0629

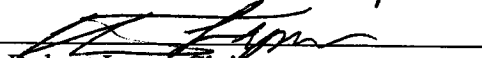
RELEASE OF ALL CLAIMS

KNOW ALL MEN BY THESE PRESENTS, that I, Robert L. Lynn, for and in consideration of the sum of Five Hundred Fifty-Three Dollars and Thirty-Five Cents (\$553.35) paid by the North Carolina Department of Agriculture and Consumer Services by and through the North Carolina Forest Service, do hereby release, and discharge and by these presents do for myself, my heirs, executors, administrators and assigns release and forever discharge the North Carolina Department of Agriculture and Consumer Services, the North Carolina Forest Service, and the State of North Carolina, its officers, employees, servants and agents of and from any and all claims, demands, damages, actions, cause of action of whatever kind or nature arising out of an incident that allegedly occurred on or about July 5, 2018 wherein my 2017 Chevrolet Truck sustained damage.

I understand that this release is made as a compromise to avoid expense and to terminate all controversy and claims for injuries and/or damages of whatever nature, known or unknown, including future developments thereof, in any way growing out of or connected with said incident that occurred on or about July 5, 2018 and involving damage to my 2017 Chevrolet Truck. I agree that the sum paid is solely by way of compromise of a disputed claim, and it is therefore specifically agreed that this release shall be a complete bar to all claims or suits for injuries or damages of whatsoever nature relating to the incident that occurred on or about July 5, 2018 as hereinabove described.

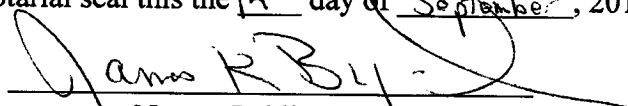
I further understand that until this release is executed by all parties and payment has been received by the claimant, that this release will not become effective.

IN WITNESS WHEREFORE, I have hereunto set my hand this 14 day of September, 2018.

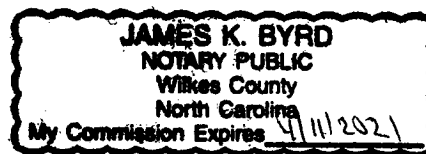

Robert Lynn, Claimant
6865 North NC Highway 16
Millers Creek, NC 28651

North Carolina
County of Wilkes

Personally appeared before me this day Robert Lynn and acknowledged the execution of the foregoing Release of All Claims. Witness my hand and notarial seal this the 14th day of September, 2018.


Notary Public

My Commission Expires: 4/11/2021



AGREED TO:
North Carolina Department of Agriculture
and Consumer Services by and through
The North Carolina Forest Service

Scott Bissette, Assistant Commissioner

STATE OF NORTH CAROLINA
COUNTY OF ROBESON

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, DIVISION OF SOIL AND
WATER CONSERVATION

IN THE MATTER OF ROBERT M. MORGAN, JR.;
COST SHARE CONTRACT NO. 78-15-0808

SETTLEMENT AGREEMENT
RECITALS

This Settlement Agreement and Release is made and entered into on the date reflected opposite the signature of Patricia K. Harris, appearing below on page 3, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter, "Department") and Robert M. Morgan, Jr. (hereinafter "Mr. Morgan").

WITNESSETH:

WHEREAS, on June 9, 2008 Mr. Robert M. Morgan, Jr. entered into a cost share contract agreement with the Division of Soil and Water Conservation ("DSWC") bearing contract number 78-15-0808 (hereinafter the "agreement") for the installation of a cropland conversion to grass practice. The Department's Division of Soil and Water Conservation (hereinafter, "DWSC") approved this agreement and paid Mr. Morgan the sum of seven thousand dollars (\$7,000.00) for the installation of the cropland conversion to grass practice.

WHEREAS, pursuant to said cost share contract Mr. Morgan was required to maintain grass in the contracted tracts and fields for 10 years. In the event Mr. Morgan failed to maintain grass in the contracted tracts and fields for 10 years, he must repay a pro-rated amount of the total contract.

WHEREAS, on August 19, 2015, DWSC determined that that Mr. Morgan had breached the cost share contract by converting the crop field referred to in the contract to a solar farm.

WHEREAS, the Department has requested that Mr. Morgan convert the crop fields and tracts placed in the solar farm to grassland or repay the pro-rated amount of the contract in the sum of Three Thousand Eighty Dollars. The Department and Mr. Morgan desire to compromise and settle any and all disputes arising out of or in any way connected with this matter as described above and the issues involved in the above-described claim and dispute.

NOW, THEREFORE, IT IS RESOLVED that, in consideration of Mr. Morgan's promise to pay to the Department the sum of Three Thousand Eighty Dollars (\$3,080.00) in twelve equal monthly payments of \$256.67, according to the terms set forth below, and Department hereby agrees to release Mr. Morgan from any and all liability arising out of the dispute upon receipt of the final payment, and for other good and

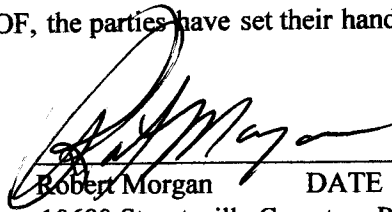
sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

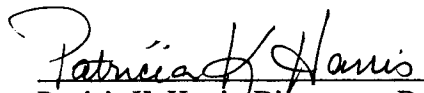
1. Mr. Morgan shall pay the sum stated above in twelve equal payments of \$256.67. Each payment shall be due and payable on the fifteenth of the month, **with the first payment due on January 15, 2016**. The Department shall deem Mr. Morgan's monthly payment as being received timely if Mr. Morgan sends his payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the fifteenth day of the month in which that payment is due, properly addressed to Janine Owens, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Mr. Morgan agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Mr. Morgan complies with the terms of this Settlement Agreement, the Department shall forebear from bringing a civil action against Mr. Morgan to collect the sum of money he received under the above-mentioned agreement, and shall forebear from filing the Confession of Judgment Mr. Morgan has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, Appendix I, only if Mr. Morgan fails to make a monthly payment on time, after giving Mr. Morgan notice, by telephone call and e-mail message of his failure to make said payment, and after allowing Mr. Morgan three business days to cure his breach by paying the amount due in full..
4. The Department further agrees that, once Mr. Morgan has paid his final monthly payment and Department has received Three Thousand Eighty Dollars (\$3,080.00) in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Mr. Morgan a document confirming receipt of payment and releasing Mr. Morgan from further liability on this agreement and account. Further, the Department shall provide Mr. Morgan with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Mr. Morgan's breach of this Settlement Agreement.
5. No party admits or acknowledges any liability to any other party and specifically denies the existence of such liability.
6. No promise or agreement other than those recited above has been made as consideration for the releases and discharges effected by this agreement and the parties will give these releases and discharges for the sole consideration recited above.
7. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations and agreements are merged in this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.

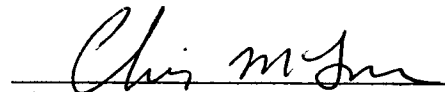
8. The parties attest that this Settlement Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.

9. This Settlement Agreement and Release shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:

 1/30/16
Robert Morgan DATE
10680 Stuartsville Cemetery Road
Laurinburg, NC 28352

 2.9.2016
Patricia K. Harris, Director DATE
NCDA & CS Division of Soil and Water
Conservation
1614 Mail Service Center
Raleigh, NC 27699-1614

 2/8/16
Christopher R. McLennan DATE
Assistant Attorney General
N. C. Department of Justice
PO BOX 629
Raleigh, NC 27602-0629

STATE OF NORTH CAROLINA

COUNTY OF DUPLIN

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
Case No.: 15CVS 14

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, STANDARDS DIVISION,

Plaintiff,

V.

RONALD KENAN,
SAFE FILTERS & HYDRAULICS, INC.

Defendants.

JUDGMENT

FILED
2015 JAN -9 PM 12:26
DUPLIN COUNTY, N.C.
BY [Signature]

Defendants now depose and say that they are, respectively, a resident of Duplin County, and a corporation duly incorporated under the laws of North Carolina, and authorize the Court to enter judgment in favor of Plaintiff in the sum of one-thousand six hundred and three dollars and seventy-nine cents (\$1,603.79), with interest from July 10, 2014.

Defendants may become liable to Plaintiff in this amount because they entered into a Settlement Agreement with Plaintiff on July 10, 2014, to settle and resolve litigation of the case captioned Ronald Kenan & Safe Filters & Hydraulics, Inc., v. N.C. Department of Agriculture and Consumer Services, case no. 14 DAG 01936, before the North Carolina Office of Administrative Hearings. Defendants brought that case against the Plaintiff to contest the Plaintiff's issuance of a civil penalty assessment against the Defendants for having violated the North Carolina Liquefied Petroleum Gas Law ("LP Gas Law") and 02 N.C. Administrative Code Chapter 38, Section .0701 et seq., which adopts and incorporates by reference the LP Gas Code of National Fire Protection Association, document NFPA 58.

The Parties resolved the matter before the N.C. Office of Administrative Hearings pursuant to the above-referenced Settlement Agreement, which is attached hereto and incorporated by reference. In said Settlement Agreement the Defendants promised to comply with the referenced statutes and regulations. Defendants also agreed in said Settlement Agreement to execute this Judgment in favor of the Plaintiff. As full and fair consideration for said promises and actions, the parties agreed that the Plaintiff would not file and execute upon this Judgment unless and until it found that the Defendants, either individually or jointly, had violated the North Carolina Liquefied Petroleum Gas Law ("LP Gas Law") or 02 N.C. Administrative Code Chapter 38, Section .0701 et seq., which adopts and incorporates by reference the LP Gas Code of National Fire Protection Association, document NFPA 58, or otherwise failed to comply with the terms and obligations of said Settlement agreement.

1. The first step in the process of the investigation is to identify the problem. This involves a thorough review of the available information and a clear definition of the issue at hand.

1. *Phragmites australis* (Cav.) Trin. ex Steud.

On September 17, 2014, Plaintiff's officers discovered that Defendant Ronald Kenan or Defendant Safe Filters & Hydraulics, Inc., of which Defendant Ronald Kenan is owner and president, had failed to meet their obligations under said Settlement Agreement by committing the violations set forth in the report issued by the Plaintiff, which is attached hereto and incorporated by reference.

Ronald Kenan
Defendant Ronald Kenan, Individually and in his capacity as Owner & President of Defendant Safe Filters & Hydraulics, Inc.

Sworn to and subscribed before
me this 28 day of June, 2014.

Edmonica J. Gue my Commission expires: 11-18-2018
Notary Public

Upon the foregoing confession of judgment, IT IS THEREFORE ORDERED that judgment is entered for Plaintiff against Defendants in the sum of one thousand six hundred and three dollars and seventy-nine cents (\$1,603.79), with interest to run from July 10, 2014, together with the costs in the sum of \$ 25.00. Said judgment amount is reduced and Defendant is given credit for payment of the sum of \$ -0-, which Plaintiff hereby acknowledges receipt of prior to filing of this Confession of Judgment.

This the 9th day of January, 2015.

Sylvia W. Houston
Clerk of Court

FILED
2015 JAN -9 PM 12:26
DUPLIN COUNTY C.S.C.
BY [Signature]

STATE OF NORTH CAROLINA
COUNTY OF DUPLIN

IN THE OFFICE OF
ADMINISTRATIVE HEARINGS
14 DAG 01936

RONALD KENAN,
SAFE FILTERS & HYDRAULICS, INC.

Petitioners,

v.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, STANDARDS DIVISION,

Respondent.

SETTLEMENT AGREEMENT

RECITALS

Ronald Kenan and Safe Filters & Hydraulics, Inc., (the "Petitioners") and the North Carolina Department of Agriculture and Consumer Services (the "Respondent") desire to fully and finally settle this and all other disputes and controversies surrounding the Petitioner's violations of the North Carolina Liquefied Petroleum Gas Law ("LP Gas Law") and 02 N.C. Administrative Code Chapter 38, Section .0701 et seq., which adopts and incorporates by reference the LP Gas Code of National Fire Protection Association, document NFPA 58, desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

Whereas, the Respondent inspected Petitioners' facility at 6968 NC Hwy 41 S, Wallace, North Carolina and issued to the Petitioners four separate civil penalties for violations set forth as follows:

Date Issued	Penalty Amount	Violation	Description	Inspection no. & Date
9/18/2013	\$200.00	GS 119-56	Lacked license	47671 9/12/2013
10/18/2013	\$500.00	NFPA 6.22.3 NFPA 7.2.3.2.B NFPA 7.2.2.1	No Smoking Sign; no open flame;	47792 10/15/2013

		NFPA 4.4	no ignition source within 25 feet; Personnel trained - for safe fueling	
12/12/2013	\$400.00	GS 119-56	Lacked license	47969 12/6/2013
1/14/2014	\$1,250.00	NFPA 6.22.3; NFPA 7.2.3.2.B; NFPA 7.2.2.1; NFPA 4.4	No Smoking Sign - no open flame, no ignition source within 25 feet; Personnel trained - for safe fueling	48048 1/8/2014

Whereas, on March 17, 2014, Petitioners filed a Petition for Contested Case Hearing with the North Carolina Office of Administrative Hearings.

WHEREAS the parties desire to resolve these matters without further litigation.

NOW THEREFORE, the parties agree as follows:

1. The parties are willing to accept a compromise and settlement of the dispute between them and this Agreement is made in order to completely and finally resolve their claims and differences as stated herein upon the following conditions:

a. Petitioners agree to pay the sum of one thousand six hundred and three dollars and seventy-nine cents (\$1603.79) in seven monthly payments of \$200.00 and an eighth payment of \$203.79 to the Respondent. Said payments shall be due by the fifth day of each month. The first payment shall be due on the fifth day of the month immediately following the month in which the Respondent's authorized agent signs this Settlement Agreement. A payment shall be deemed timely received if Petitioners deposit the payment postage pre-paid with the US Postal Service before midnight on the fifth day of the month in which the payment is due, as indicated by the payment's postmark.

b. Petitioners' breach of any conditions in paragraph (a) above may render due and

payable the entire amount of the discounted civil penalty of \$1,603.79, plus late fees and interest, which become due and payable within thirty (30) days of the Standards Division's or Attorney General's Office's written demand to Petitioners for such payment. Failure by Petitioners to thereafter pay this amount or the unpaid portion thereof shall be immediate grounds for a collection action and entitle the Respondent to file with the Superior Court the attached Confession of Judgment.

c. As further consideration Petitioners agree to sign Appendix A, a Confession of Judgment in favor of the Respondent for the sum of one thousand six hundred and three dollars and seventy-nine cents (\$1,603.79) or the unpaid portion thereof. The Respondent shall not file said Confession of Judgment with the Court unless the Petitioners violate this Settlement Agreement by:

- 1) Failing to pay the \$1,603.79 within the time and according to the terms provided in this Settlement Agreement; or
- 2) Committing another violation of the laws and/or rules enforced by the Standards Division of the NCDA&CS, specifically but not limited to the North Carolina Liquefied Petroleum Gas Law ("LP Gas Law") and 02 N.C. Administrative Code Chapter 38, Section .0701 et seq., which adopts and incorporates by reference the LP Gas Code of National Fire Protection Association, document NFPA 58. Petitioners expressly acknowledge that Respondent may, as a matter within its sound discretion, waive the right to file the Confession of Judgment for a new violation and, instead, issue to the Petitioners a new civil penalty assessment.

d. Petitioners acknowledge their right to a formal hearing to resolve this matter and expressly waive said right by consenting to the terms of this Agreement. At the same time

- Petitioners sign and execute this Agreement they shall sign and file with the North Carolina Office of Administrative Hearings a Voluntary Dismissal with Prejudice; and

e. This Settlement Agreement shall be binding upon the parties and is entered into knowingly, intelligently and voluntarily.

2. The parties mutually agree to act in good faith in the implementation of this agreement. The parties agree to bear their own attorneys fees and costs. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

3. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

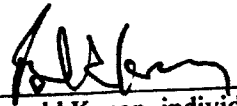
4. The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

5. North Carolina law shall govern the interpretation and enforcement of this Agreement.



IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates indicated below:

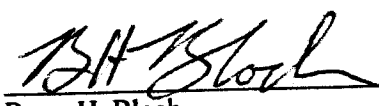
PETITIONERS



Ronald Kenan, individually and as
President & Owner of Petitioner SAFE FILTERS & HYDRAULICS, INC.

Date: 6-28-14

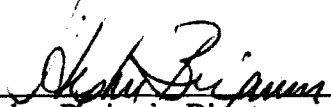
ATTORNEY FOR RESPONDENT



Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: 7/8/14

FOR RESPONDENT:



Stephen Benjamin, Director
Standards Division,
North Carolina Department of Agriculture & Consumers Services

Date: 7/10/14

AGREEMENT

This agreement (the "Agreement") is made and entered into effective as of this 29th day of April 2016 by and between the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section (hereinafter referred to as the "Department of Agriculture"), and Rutherford County Animal Shelter (hereinafter referred to as the "Petitioner" or "Rutherford County").

RECITALS

WHEREAS, on September 24, 2014, the Department of Agriculture issued a Notice of Violations and Assessment of Civil Penalty to Rutherford County, a true and correct copy of which is annexed to this Agreement as Exhibit A; and

WHEREAS, on November 25, 2014, Rutherford County filed a Petition for a Contested Case Hearing against the Department of Agriculture in the North Carolina Office of Administrative Hearings (hereinafter referred to as the "OAH") in that contested case entitled *County of Rutherford v. NC Department of Agriculture and Consumer Services*, No. 14 DAG 09337 (hereinafter referred to as the "OAH Case"); and

WHEREAS, in summary, Rutherford County alleged in its OAH Petition for a Contested Case Hearing, *inter alia*, that the Department of Agriculture had acted improperly and/or without lawful authorization in issuing to Rutherford County a Notice of Violations, Assessment of Civil Penalty dated September 24, 2014, and in assessing a civil penalty against Rutherford County in the amount of \$5,000.00, also on September 24, 2014; and

WHEREAS, in its Prehearing Statement filed in the OAH Case, the Department of Agriculture denied the allegations made by Rutherford County in its Petition for a Contested Case Hearing in the OAH Case; and

WHEREAS, subsequent to Rutherford County's filing of its Petition for a Contested Case Hearing in the OAH Case, the parties entered into settlement negotiations and discussions and agreed in principal to settle their disputes on the following terms: (i) Rutherford County would prepare a written policy approved by Dr. Patricia Norris, Director, Animal Welfare Section, North Carolina Department of Agriculture and Consumer Services and include the policy in the Rutherford County Animal Shelter Standard Operating Procedure Manual, stating that the Rutherford County Animal Shelter facilities must be cleaned twice a day in accordance with applicable Division of Animal Welfare ("DAW") regulations and that young animals must be fed two times a day, 365 days a year, in accordance with applicable DAW regulations; (ii) Rutherford County would provide a list of financial expenditures which show \$5,000.00 of

capital improvements made to the Rutherford County Animal Shelter after the date of the imposition of the civil money penalty; (iii) once the matters summarized in sub-paragraphs (i) and (ii) were accomplished, the Department of Agriculture would formally waive the \$5,000.00 civil penalty it assessed against Rutherford County on September 24, 2016; and (iv) once the matters summarized in sub-paragraphs (i), (ii) and (iii) were accomplished, Rutherford County would file a Notice of Dismissal With Prejudice of its Petition for a Contested Case Hearing in the OAH Case; and

WHEREAS, all of the actions referred to in sub-paragraphs (i) and (ii) above have now been accomplished; and

WHEREAS, the Department of Agriculture and Rutherford County continue to desire to fully and finally compromise and settle the OAH Case and all other disputes and controversies between them involving or arising out of the matters embraced by Rutherford County's Petition for a Contested Case Hearing in the OAH Case; and

WHEREAS, the Department of Agriculture and Rutherford County desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of further litigation.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, the Department of Agriculture and Rutherford County agree as follows:

1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by this reference as if fully set forth herein.
2. By its signature below, the Department of Agriculture hereby formally waives the \$5,000.00 civil penalty it assessed against Rutherford County on September 24, 2014.
3. By no later than May 29, 2016, Rutherford County shall file a Dismissal with Prejudice of the OAH Case and shall serve a file-stamped copy of said Dismissal on counsel for the Department of Agriculture in the OAH Case.
4. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

5. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referred to in this Agreement.

6. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

7. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

8. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor of or against any party based upon which party drafted or participated in drafting this Agreement.

9. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and signed as of the day and year indicated by their signatures below:

THE NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
VETERINARY DIVISION, ANIMAL WELFARE
SECTION

By: 
Patricia Norris

Director, Animal Welfare Section, North Carolina
Department of Agriculture and Consumer Services

Date: April 29, 2016

Signature of Rutherford County appears on the following page.

RUTHERFORD COUNTY SHERIFF'S OFFICE

By: Chris Francis
Chris Francis, Sheriff

Date: 5/12/2016

Exhibit A

September 24, 2014 Notice of Violations
and Assessment of Civil Penalty



Steven W. Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Veterinary Division

Steven Wells, DVM
Interim State Veterinarian

September 23, 2014

Rutherford County Animal Shelter
Attn: Lieutenant Leon Godlock
576 Laurel Hill Drive
Rutherfordton, North Carolina 28139



NOTICE OF CIVIL PENALTIES

RE: CIVIL PENALTY ASSESSMENT FOR VIOLATIONS OF ANIMAL WELFARE ACT, N.C. GENERAL STATUTE § 19A-40 AND TITLE 2, N.C. ADMINISTRATIVE CODE, CHAPTER 52J, SECTIONS .0201, .0202, .0204, .0205 & .0207

Dear Lieutenant Godlock:

Pursuant to N.C. Gen. Stat. § 19A-40 I am issuing this notice to you that Rutherford County Animal Shelter is assessed a civil penalty of \$5,000.00, as provided in the enclosed Notice of Violations and Order.

With regard to the civil penalty, within 60 days from the date of receipt, you must do one of the following:

1. Pay the civil penalty assessment; or
2. File a written petition for a contested case hearing in the NCOAH to appeal the penalty assessment.

Pursuant to N.C. Gen. Stat. § 150B-22, either party to a dispute may initiate informal settlement negotiations at any time. To negotiate a settlement of this assessment, present your offer to Dr. Steven C. Wells, Interim State Veterinarian, Veterinary Division, who may be contacted by telephone at (919) 733-7601. Settlement offers do not extend the 60-day deadline for payment or filing of a contested case petition.

Additional information about your options is provided below:

PAYMENT

To pay the penalty, please send your payment by check or money order made payable to the North Carolina Department of Agriculture and Consumer Services to:

North Carolina Department of Agriculture and Consumer Services
Dr. Steven C Wells
Interim State Veterinarian
1030 Mail Service Center
Raleigh, NC 27699-1030

APPEAL

If you file a contested case petition, it must be in writing and in the form prescribed by N.C. Gen. Stat. § 150B-23. The petition must be accompanied by a filing fee of twenty dollars (\$20.00) payable to the N.C. Office of Administrative Hearings. Should you have any questions about what the fee would be for your case, please contact the OAH Clerk's Office at 919-431-3000. Payment can be made by cash, money order, certified check or check drawn on an attorney's trust account. Make checks payable to: Office of Administrative Hearings. File the petition and one copy with:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714


Any questions about filing a petition may be directed to the Clerk of OAH by telephone 919/733-0926. You must serve NCDA&CS by mailing a copy of the petition to:

Ms. Tina Hlabse
North Carolina Department of Agriculture and Consumer Services
Registered Agent and General Counsel
1001 Mail Service Center
Raleigh, NC 27699-1001

Payment of the penalty will not foreclose further enforcement action against you for any new violation. If the violations which resulted in the assessment are of a continuing nature, NCDA&CS reserves the right to assess additional civil penalties in the future or take other enforcement action against you.

Your attention to this matter is appreciated.

Sincerely,


Steven C Wells, DVM
Interim State Veterinarian

Attachment: Assessment Document

cc: Mr. Barry Bloch, Assistant Attorney General
Ms. Tina Hlabse, Legal Affairs

STATE OF NORTH CAROLINA
COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, VETERINARY DIVISION

IN THE MATTER OF
RUTHERFORD COUNTY ANIMAL
SHELTER

) NOTICE OF VIOLATIONS,
) ASSESSMENT OF CIVIL
) PENALTY
)
) For Violations Of:
) Animal Welfare Act
) N.C. General Statute § 19A-40
) 2 N.C. Administrative Code 52J
) .0201, .0202, .0204, .0205, & .0207

Acting pursuant to N.C. Gen. Stat. § 19A-40, Dr. Steven C. Wells, Interim State Veterinarian, Animal Welfare Section, Veterinary Division, North Carolina Department of Agriculture and Consumer Services (NCDA&CS) makes the following:

FINDINGS OF FACT

1. At all times pertinent to this matter Rutherford County Animal Shelter ("RCAS" or the "shelter") is an animal shelter registered pursuant to N.C. Gen. Stat. § 19A-26.
2. The Animal Welfare Section, NCDA&CS ("AWS") received a complaint that kittens had been left in RCAS' surrender enclosures, aka "drop boxes," over a holiday weekend in excessive heat without food or water. The complaint also alleged that the shelter outdoor enclosures were not cleaned on the Monday of the Labor Day holiday weekend.
3. During an inspection and investigation on September 3, 2014, Animal Welfare Section Inspector Jay Blatche ("Inspector Blatche") learned that Sheriff's Department Cpl. Jones was responsible for the animal shelter as on-call animal control officer ("ACO") on August 30 and 31, 2014.
4. Cpl. Jones could not state what times he was at the shelter to clean and feed the animals on August 30 and 31, 2014.
5. Cpl. Jones stated that the shelter was at nearly full capacity for cats and he locked the "drop boxes" during his weekend visit to the RCAS.
6. Cpl. Jones stated that, on Sunday, August 31, 2014, he euthanized four cats that appeared to be sick, cleaned the enclosures and fed the animals. He stated that he checked the "drop boxes" and these were empty.
7. Inspector Blatche determined that Deputy Sara Hartman was the on-call ACO and

responsible for RCAS on Monday, September 1, 2014. He interviewed Deputy Hartman. She stated she received a call that there were kittens in the drop boxes. She reported that she arrived after receiving that call, after 2:00 p.m. She removed the kittens from the drop box, fed the animals, and cleaned all of the enclosures except for the drop boxes and left hand outside enclosure. She stated she could not clean these enclosures because the water hose on that side of the building was inoperable. She reported that, on September 1, 2014, RCAS had 20 dogs and 49 cats. She reported that she left RCAS at approximately 4:00 p.m.

8. Inspector Blatche determined that RCAS has no special written procedure for cleaning and animal feeding for weekends or holidays. The ACO who is "on-call" is authorized to perform these duties once per weekend day or holiday even when there are puppies or kitten present that must be fed twice daily.
9. RCAS shelter personnel keep no written records of when weekend or holiday cleanings or feedings are done or when the drop boxes are checked.
10. At 1:05 p.m. September 3, 2014, Inspector Blatche checked the inside temperature of the RCAS "drop box." The thermometer read 91.9 degrees F. Weather conditions at RCAS on September 3, 2014, were the same as those in that vicinity on August 31 and September 1, 2014.
11. Inspector Blatche examined the door to the opening of the "drop box" and determined that, even if it was locked, it could be forced open wide enough to allow a person to place a kitten, puppy or small animal inside.

N.C. Gen. Stat. § 19A-40 provides that any violation of the regulations in 02 NCAC Chapter 52J authorizes the Director of Animal Welfare to impose a civil penalty of up to \$5,000.00 per violation. As a result of this investigation, the North Carolina Department of Agriculture and Consumer Services, Veterinary Division, Animal Welfare Section, alleges that RCAS, either by act or omission, violated the following five provisions of the N.C. Administrative Code:

- a) North Carolina Administrative Code 52J .0201
- c) North Carolina Administrative Code 52J .0202
- d) North Carolina Administrative Code 52J .0204
- e) North Carolina Administrative Code 52J.0205
- f) North Carolina Administrative Code 52J .0207

(See Appendix for text of cited Ch. 52J regulations)

§ 19A-40. Civil Penalties.

The Director may assess a civil penalty of not more than five thousand dollars (\$5,000) against any person who violates a provision of this Article or any rule promulgated thereunder. In determining the amount of the penalty, the Director shall consider the degree and extent of harm caused by the violation. The clear proceeds of civil penalties assessed pursuant to this

section shall be remitted to the Civil Penalty and Forfeiture Fund in accordance with G.S. 115C-457.2. (1995, c. 516, s. 6; 1998-215, s. 3.)

III. DECISION

As required by N.C. Gen. Stat. § 19A-40 in determining the amount of the civil penalty, I have considered the degree and extent of harm caused by the violations listed above.

Accordingly, RCAS is assessed a civil penalty of: \$5,000.00 for violating N.C. General Statute § 19A-40 and 2 North Carolina Administrative Code 02 NCAC 52J .0201, .0202, .0204, .0205, and .0207.

\$5,000.00 TOTAL AMOUNT ASSESSED

9-24-2014
Date

Steven C Wells, DVM

Steven C Wells, DVM
Interim State Veterinarian
North Carolina Department of
Agriculture & Consumer Services

Appendix

SUBCHAPTER 52J - ANIMAL WELFARE SECTION

SECTION .0200 - FACILITIES AND OPERATING STANDARDS

02 NCAC 52J .0201 GENERAL

- (a) Housing facilities for dogs and cats shall be structurally sound and maintained in good repair to protect the animals from injury, contain the animals and restrict the entrance of other animals and people.
- (b) All light fixtures and electrical outlets in animal areas shall be in compliance with the State Building Code.
- (c) Facilities shall have reliable and safe electric power as necessary to comply with the Animal Welfare Act.
- (d) Supplies of food and bedding shall be stored in facilities which adequately protect such supplies against infestation or contamination by vermin and insects. All open bags of food shall be stored in airtight containers with lids. Refrigeration shall be provided for supplies of perishable food.
- (e) Provisions shall be made for the daily removal and disposal of animal and food waste, bedding and debris from the housing facility in accordance with local ordinances, to assure facility will be maintained in a clean and sanitary manner.
- (f) Hot and cold running, potable water must be available. Facilities such as washroom, basin or sink shall be provided to maintain cleanliness among animal caretakers, animals, and animal food and water receptacles.
- (g) Each facility shall have the ability to confirm ambient temperature.
- (h) A separate five-foot perimeter fence is required if any animals have access to an outdoor enclosure, including unsupervised exercise areas.
- (i) An adequate drainage system must be provided for the housing facility.
- (j) All areas of a facility are subject to review or inspection by North Carolina Department of Agriculture and Consumer Services employees during normal business hours (8:00 a.m. through 5:30 p.m. Monday through Friday).
- (k) All animals in a facility are subject to the requirements of the Animal Welfare Act, regardless of ownership.
- (l) A licensee or registrant shall comply with all federal, state and local laws, rules and ordinances relating to or affecting the welfare of dogs and cats in its facility.
- (m) No dog or cat shall be in a window display except during business hours and then only in compliance with standards set forth in this Section.

History Note: Authority G.S. 19A-24;
Eff. April 1, 1984;
Amended Eff. January 1, 2005.

02 NCAC 52J .0202 INDOOR FACILITIES

- (a) Indoor housing facilities for dogs and cats shall be adequately heated and cooled when necessary to protect the dogs and cats from cold and excessive heat and provide for their health and comfort. The ambient temperature shall not be allowed to fall below 50 degrees F. or exceed 85 degrees F.
- (b) Indoor housing facilities for dogs and cats shall be adequately ventilated to provide for the health and comfort of the animals at all times. The facilities shall be provided with fresh air either by means of windows, doors, vents or air conditioning and shall be ventilated so as to minimize drafts. Air flow shall be adequate to minimize odors and moisture condensation.
- (c) Indoor housing facilities for dogs and cats shall have adequate illumination to permit routine inspections, maintenance, cleaning and housekeeping of the facility and observation of the animals. Illumination shall provide regular diurnal lighting cycles of either natural or artificial light, uniformly diffused throughout the animal facilities.
- (d) Interior building surfaces of indoor facilities with which animals come in contact shall be constructed and maintained so that they are impervious to moisture, and can be readily sanitized.
- (e) A suitable method of drainage shall be provided to rapidly eliminate excess water from an indoor housing facility. If eluxed drain systems are used, they shall be equipped with traps and installed to prevent odors and backup of sewage. The drainage system shall be constructed to prevent cross-contamination among animals.

History Note: Authority G.S. 19A-24;
Eff. April 1, 1984;
Amended Eff. January 1, 2005.

Appendix

02 NCAC 52J .0204 PRIMARY ENCLOSURES

- (a) Primary enclosures shall be constructed so as to prevent contamination from waste and wastewater from animals in other enclosures. All surfaces with which an animal comes in contact shall be impervious to moisture. For primary enclosures placed into service on or after January 1, 2005, no wood shall be within the animal's reach. For primary enclosures in use in a licensed or registered facility prior to January 1, 2005, any damaged wood must be replaced in a manner that does not permit contact with wood by the animal.
- (b) Primary enclosures for dogs and cats shall be structurally sound and maintained in good repair and in a manner to prevent injury to animals and keep other animals out. Primary enclosures shall be constructed so as to provide space to allow each dog or cat to walk, turn about freely, and to easily stand, sit, or lie in a natural position. The height of a primary enclosure other than a cage shall be no less than five feet. All enclosures shall be constructed to prevent the escape of animals.
- (c) Each primary enclosure shall be provided with a solid resting surface or surfaces adequate to comfortably hold all occupants of the primary enclosure at the same time. All resting surfaces must be of a non-porous or easily sanitized material, such as a towel, or a disposable material such as newspaper. The resting surface or surfaces shall be elevated in primary enclosures housing two or more cats.
- (d) In addition to Paragraph (b) of this Rule, each dog shall be provided a minimum square footage of floor space equal to the mathematical square of the sum of the length of the dog in inches, as measured from the tip of its nose to the base of its tail, plus six inches, then divide the product by 144. The calculation is: (length of dog in inches + 6) x (length of dog in inches + 6) = required floor space in square inches. Required floor space in square inches ÷ 144 = required floor space in square feet. The calculation shall be expressed in square feet. Not more than four adult dogs shall be housed in the same primary enclosure without supervision.
- (e) If more than four dogs are housed in a common area or enclosure, then there must be at least one person supervising each 10 dogs housed within each enclosure or common area.
- (f) In addition to Paragraph (b) of this Rule, each feline older than six months housed in any primary enclosure shall be provided a minimum of four square feet of floor space which may include elevated resting surfaces. Each feline younger than six months shall be provided 1.5 square feet. Not more than 12 cats shall be housed in the same primary enclosure.
- (g) In all cat enclosures, a receptacle containing clean litter shall be provided for waste. A minimum of one receptacle per three cats is required.

History Note: Authority G.S. 19A-24;
Eff. April 1, 1984;
Amended Eff. January 1, 2005; April 1, 1985.

02 NCAC 52J .0205 FEEDING

- (a) Dogs and cats shall be fed at least once each 24-hour period except as otherwise might be required to provide adequate veterinary care. Food shall be commercially prepared food which complies with laws applicable to animal feed or the food shall be provided by the owner. The food shall be free from contamination, wholesome, palatable, and of adequate quality and quantity appropriate for the given size, age, and condition of an animal to meet the daily requirements for nutritional value. Puppies and kittens less than six months of age shall be fed at least twice in each 24-hour period. An eight-hour interval between feedings is required if only two feedings are offered in a 24-hour period.
- (b) Food receptacles shall be accessible to all dogs or cats and shall be located so as to minimize contamination by waste. For every adult animal, there must be at least one food receptacle offered. Food receptacles shall be durable and shall be kept clean and sanitized. Damaged receptacles shall be replaced. Disposable food receptacles may be used but must be discarded after each feeding.
- (c) Food and water receptacles in outdoor facilities shall be protected from the elements.

History Note: Authority G.S. 19A-24;
Eff. April 1, 1984;
Amended Eff. January 1, 2005; April 1, 1985.



Appendix

02 NCAC 52J .0207 SANITATION

(a) Waste shall be removed from primary enclosures and exercise areas to prevent contamination of the dogs or cats contained therein and to reduce disease hazards and odors. Enclosures and exercise areas for dogs and cats must be properly cleaned a minimum of two times per day. The animal must be able to walk or lie down without coming in contact with any waste or debris. When a hosing or flushing method is used for cleaning an enclosure, dogs or cats contained therein shall be removed during the cleaning process, and adequate measures shall be taken to protect the animals in other such enclosures from being contaminated with water and other wastes.

(b) Sanitation shall be as follows:

- (1) Prior to the introduction of dogs or cats into empty primary enclosures previously occupied, enclosures and accessories shall be sanitized in the manner provided in Subparagraph (b)(3) of this Rule.
- (2) In addition to primary enclosures being properly cleaned a minimum of two times per day, enclosures and accessories shall be sanitized a minimum of once every seven days in the manner provided in Subparagraph (b)(3) of this Rule if the same animal is housed in the same enclosure more than seven days.
- (3) Cages, rooms and hard-surfaced pens or runs shall be sanitized by:
 - (A) washing them with hot water (180 degrees F.) and soap or detergent as in a mechanical cage washer; or
 - (B) washing all soiled surfaces with a detergent solution to remove all organic matter followed by application of a safe and effective disinfectant; or
 - (C) cleaning all soiled surfaces with live steam.
- (4) Food and water receptacles shall be sanitized daily with hot water, detergent, and disinfectant.
- (5) Soiled linens and cloth products shall be mechanically washed with detergent and sanitized.
- (6) Any area accessible to multiple animals shall be kept clean and sanitary.

(c) Premises (buildings and grounds) shall be kept clean and in good repair in order to protect the animals from injury and to facilitate the prescribed husbandry practices set forth in this Rule. Premises shall remain free of accumulations of trash, junk, waste products, and discarded matter. Weeds, grasses, and bushes must be controlled so as to facilitate cleaning of the premises and to improve pest control, and to protect the health and well-being of the animals.

(d) An effective program for the control of insects, ectoparasites, and avian and mammalian pests shall be established and maintained.

History Note: Authority G.S. 19A-24;
Eff. April 1, 1984;
Amended Eff. January 1, 2005; April 1, 1985.

STATE OF NORTH CAROLINA

COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES MARKETING DIVISION
STATE FARMERS MARKET

IN THE MATTER OF SANDRA GARNER
D/B/A RAINBOW MEADOWS

SETTLEMENT AGREEMENT
RECITALS

This Settlement Agreement and Release is made and entered into the date reflected opposite the signature of Ronnie Best, appearing below on page three, by and between the North Carolina Department of Agriculture & Consumer Services (hereinafter the "Department") and Sandra Garner (hereinafter "Ms. Garner").

WITNESSETH:

WHEREAS, Ms. Garner rented space to sale goods and produce at the State Farmers Market from April 19, 2018 - April 23, 2018 and agreed to pay daily rental at the rate of Twenty Dollars per day.

WHEREAS, Ms. Garner rented space to sale goods and produce at the State Farmers Market from April 24, 2018 – June 11, 2018 and agreed to pay daily rental at the rate of Twenty-Eight Dollars per day or a total of One Hundred Sixty-Eight Dollars (\$168.00) per week.

WHEREAS, Ms. Garner rented space to sale goods and produce at the State Farmers Market from June 12, 2018 - October 29, 2018 and agreed to pay daily rental at the rate of Twenty-One Dollars per day or a total of One Hundred Sixty-One Dollars (\$161.00) per week.

WHEREAS, Ms. Garner due to Hurricane Florence, Ms. Garner was only charged for five days rental the week of September 11, 2018 -September 17, 2018.

WHEREAS, Ms. Garner has failed to pay the weekly rental rate in from April 19, 2018 – October 29, 2018 and is currently indebted to the Department in the sum of Four Thousand Four Hundred Seventy-Six Dollars for past due space rental.

WHEREAS, the Department has requested that Ms. Garner pay the outstanding rent charges totaling Four Thousand Four Hundred Seventy-Six Dollars (\$4,476.00).


NOW, THEREFORE, IT IS RESOLVED THAT, in consideration of Mr. Garner's promise to pay to the Department the sum of Four Thousand Four Hundred Seventy- Six Dollars,


(\$4,476.00), in twenty-six equal monthly payments of \$168.00 per month and one final payment of \$108.00 according to the terms set forth below, and the Department hereby agrees to waive any interest and late fees, and for other good and sufficient consideration, the receipt and sufficiency of which is acknowledged, the parties covenant and agree as follows:

1. Ms. Garner shall pay the sum of \$4,476.00 in twenty-six equal payments of \$168.00 and one final payment of \$108.00. Each payment shall be due and payable on the 10th day of the month, **with the first payment of \$168.00 due on November 10, 2018. The final payment of \$108.00 shall be due on January 16, 2021.** All checks or money orders will be made payable to NCDA&CS. The Department shall deem the monthly payment as being received timely if Ms. Garner sends her payment by U.S. Mail, First-Class, prepaid, and postmarked by midnight of the 10th day of the month in which that payment is due, properly addressed to Janine McLawhorn, NC Department of Agriculture, 1001 Mail Service Center, Raleigh, NC 27699-1001.
2. As further evidence of good faith and as consideration for this Settlement Agreement, Ms. Garner agrees to sign and has signed, before a Notary Public, the Confession of Judgment attached as Appendix I to this Settlement Agreement.
3. The Department hereby agrees that, so long as Ms. Garner complies with the terms of this Settlement Agreement, the Department shall forbear from bringing a civil action against Ms. Garner to collect the sum of money owed under the above-mentioned agreement and shall forbear from filing the Confession of Judgment Ms. Garner has executed and provided to the Department. Further, the Department agrees that it will file the Confession of Judgment, attached as Appendix I, only if Ms. Garner fails to make a monthly payment on time, after giving Ms. Garner notice by telephone call and e-mail message of his failure to make said payment, and after allowing Ms. Garner three business days to cure his breach by paying the amount due in full.
4. The Department further agrees that, once Ms. Garner has paid her final monthly payment and the Department has received the \$4,476.00 in satisfaction of the terms of this Settlement Agreement, the Department shall provide to Ms. Garner a document confirming receipt of payment and releasing Ms. Garner from further liability on this agreement and account. Further, the Department shall provide Ms. Garner with the original of Appendix I unless it has already filed Appendix I with a complaint by reason of Ms. Garner's breach of this Settlement Agreement.
5. This Settlement Agreement constitutes the entire agreement of the parties. All prior understandings, representations, and agreements are merged into this agreement, and this Settlement Agreement and Release shall not be modified in any manner, except by written instrument signed by both parties.

6. The parties attest that this Settlement Agreement was voluntarily made after ample opportunity to review the document with any individuals, advisors, and counsel so desired.
7. This Settlement Agreement shall be governed and interpreted by the laws of the State of North Carolina.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates appearing below, by their signatures:


Sandra Garner, d/b/a DATE 11-19-18
Rainbow Meadows
1065 Lloyd Harrison Road
Snow Hill, NC 28580


Ronnie Best DATE 11-27-18
Manager, State Farmers Market
1201 Agriculture Street
Raleigh, NC 27603

17-02470

RELEASE FOR PROPERTY DAMAGE ONLY

We Sedgwick CMS a/s/o AT & T for ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$320.51. We do hereby remise, release, and forever discharge The NC Department of Agriculture and Consumer Services and The State of North Carolina State Fairgrounds, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of damage to property arising out of an accident which occurred on or about the 20th day of July, 2017 near 1025 Blue Ridge Road in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows :

\$ 320.51 To: Sedgwick CMS a/s/o AT & T

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/WE have signed this Release at 12:45 PM in the State of Texas this 7th day of December, 2017.

IN THE PRESENCE OF

[Signature] Witness Name

Witness Address

City/State/Zip

Brittney Herdeltz Print Name,
As representative of Sedgwick CMS & ATT

[Signature] Signature

Address

City/State/Zip

TAX ID #

AGREED TO:

Agency: N.C. Department of Justice

By: [Signature]

MAKE CHECKS PAYABLE TO:
(Please include OSHANC and Inspection Numbers)

NORTH CAROLINA DEPARTMENT OF LABOR
ATTENTION: GWEN WILLIAMS
BUDGET DIVISION
1101 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1101

For questions regarding payment, please call (919) 733-7427

**BEFORE THE NORTH CAROLINA OCCUPATIONAL SAFETY AND HEALTH
REVIEW COMMISSION**

FILED

RALEIGH, NORTH CAROLINA AUG 29 2017

**COMMISSIONER OF LABOR FOR
THE STATE OF NORTH CAROLINA**)

COMPLAINANT,)

v.)

**N.C. DEPARTMENT OF AGRICULTURE)
and CONSUMER SERVICES dba N.C.
FOREST SERVICE
and its successors
1001 Mail Service Center
Raleigh, NC 27699**)

RESPONDENT.)

DOCKET NO.: OSHANC 2016-5814
NC Occupational & Safety
Health Commission

INSPECTION NO.: 318057122

CSHO ID.: C9882

**STIPULATION
AND NOTICE OF
SETTLEMENT**

NOW COME the parties in the above-captioned action, pursuant to Rule .0701 of the Rules of Procedure adopted by the North Carolina Occupational Safety and Health Review Commission, and respectfully show unto the Hearing Examiner as follows:

FACTS

1. Respondent is a government agency duly organized and existing under the laws of the State of North Carolina. Respondent maintains a place of business in Clyde, North Carolina.
2. Between March 16, 2016 and March 17, 2016, Leighton Dowdle, an Occupational Safety and Health Officer with the North Carolina Department of Labor, conducted an inspection of Respondent's worksite located at 1966 Martins Creek Road in Clyde, North Carolina.
3. As a result of the inspection, on May 17, 2016, Complainant issued the following Citations:

CITATION NUMBER ONE (Serious)

<u>Item No.</u>	<u>Standard</u>	<u>Abatement Date</u>	<u>Penalty</u>
1	29 CFR 1910.266(e)(1)(ii)(H)	Immediately	\$1125.00

4. The Respondent submitted a timely Notice of Contest, dated June 16, 2016.
5. The parties having reached a Settlement Agreement now seek approval of said Agreement by the Hearing Examiner.

STIPULATIONS

Effective upon approval of this Stipulation and Notice of Settlement, the parties to this action hereby agree and stipulate to the following settlement of the matters at issue herein:

1. Respondent agrees that the violations alleged in the Citation and Notification of Penalty, as amended, have been abated, and agrees to continue to use its best efforts to comply with the requirements of the Occupational Safety and Health Act of North Carolina (hereinafter referred to as the "Act").
2. Respondent further agrees to the following:
 - a) Create and implement a standard operating procedure (SOP) that will address employee violations of safety and health rules/regulations. Such policy will utilize various methods to adequately address noted violations. These methods include, but are not limited to, employee retraining, coaching, and counseling. The SOP will also require that:
 - i. All violations result in a conference with the employee and his/her supervisor. During such conference the violation will be discussed, the violated rule/regulation will be reviewed, an action plan will be developed to prevent future violations, and a determination will be made as to the type of follow up necessary to address the violation;
 - ii. All items discussed during the conference with the employee will be documented; Such document will be signed by both the employee and supervisor and will be made available to NCDOL upon request;

iii. Nothing in the SOP would prevent Respondent from taking disciplinary action against an employee for a first time violation of a health or safety rule/regulation; and

iv. Willful, intentional, or repeated violations will result in appropriate disciplinary action up to, and including, dismissal.

- b) Create an oversight process for its employees engaged in felling work to ensure that these employees are properly inspecting their equipment prior to beginning work;
- c) Revise its monthly inspection checklist to specifically require its employees to inspect the chain brakes, throttle interlocks and chain catchers of their chainsaws; and
- d) Train and/or retrain relevant employees regarding equipment inspection requirements to ensure that they know the chainsaw parts to inspect prior to operating the chainsaw.

3. Complainant agrees to make the following amendments to the Citations:

- a) Reclassify Citation One, Item 1 as non-serious; and
- b) Reduce the penalty for Citation One, Item 1 to \$500.

4. The parties agree to bear their own attorney's fees, costs and other expenses that have been incurred in connection with any stage of these proceedings up to and including the filing of this Stipulation and Notice of Settlement.

5. The parties agree that this Stipulation and Notice of Settlement is a full and final settlement of the claims set out in the underlying Citation and Notification of Penalty, and none of the foregoing agreements, statements, stipulations and actions taken by the Respondent shall be deemed an admission by the Respondent of any of the allegations contained in the Citation and Notification of Penalty or waiver of defenses; provided, however, that in any subsequent proceeding with respect to matters covered by this Stipulation and Notice of Settlement brought directly under the Act by Complainant, this Agreement shall have the full force and effect of a final order. The agreements, statements, stipulations and actions herein are made solely for the

purpose of settling this matter economically and amicably without further litigation and shall not be used for any other purpose except for proceedings and matters arising under the Occupational Safety and Health Act and Article 21, Chapter 95 of the North Carolina General Statutes.

6. Upon approval of this Stipulation and Notice of Settlement by the Hearing Examiner, the Respondent agrees to pay the new proposed penalty of \$500.00 within ten (10) days following the receipt of the Order approving the Stipulation and Notice of Settlement.

7. Respondent agrees that by signing this Stipulation and Notice of Settlement and upon approval of said Stipulation and Notice of Settlement by the Hearing Examiner, its Notice of Contest is withdrawn as a matter of law.

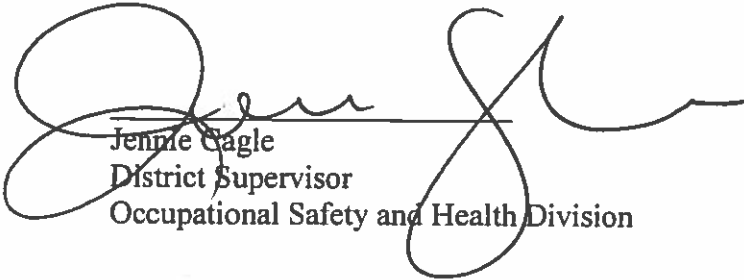
8. The parties agree that there are no other matters that remain to be decided, and there has been no employee objection to the reasonableness of any abatement period.

9. Respondent shall post this Stipulation and Notice of Settlement in accordance with Rules .0107(e), .0107(f), .0107(h) and .0701(c) of the Rules of Procedure of the North Carolina Occupational Safety and Health Review Commission.

WHEREFORE, the parties to this action hereby respectfully request approval of this
Stipulation and Notice of Settlement.

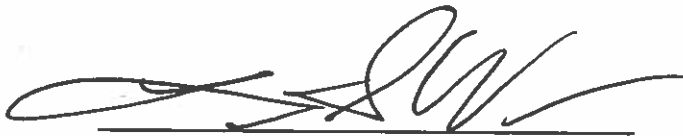
This the 15th day of August, 2017.

APPROVED BY:



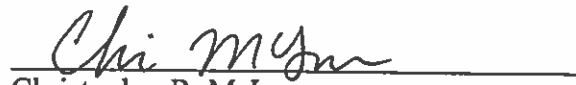
Jennie Eagle
District Supervisor
Occupational Safety and Health Division

JOSH STEIN
Attorney General



Larissa S. Williamson
Special Deputy Attorney General
North Carolina Department of Justice
P.O. Box 629/Labor Section
Raleigh, North Carolina 27602-0629
Telephone No. (919) 716-6680

ATTORNEYS FOR COMPLAINANT



Christopher R. McLennan
Assistant Attorney General
North Carolina Department of Justice
P.O. Box 629/Services to State Agencies
Raleigh, North Carolina 27602-0629
Telephone No. (919) 716-6507

ATTORNEY FOR RESPONDENT

**NORTH CAROLINA OCCUPATIONAL SAFETY AND HEALTH
REVIEW COMMISSION**

**1101 Mail Service Center
RALEIGH, NORTH CAROLINA 27699-1101**

SETTLEMENT - EMPLOYEE RIGHTS

TO THE EMPLOYEES OF NC DEPT OF AGRICULTURE & CONSUMER SERVICES dba

NC FOREST SERVICE:

Your employer has been charged with a violation of the Occupational Safety and Health Act of North Carolina. A proposed settlement concerning the nature of the violations, the penalty, and the period of abatement has been tentatively reached by the Department of Labor and your Employer. Pursuant to Rule .0701(c) of the Rules of Procedure of the Review Commission, any objections to the reasonableness of any proposed abatement date must be filed within 15 working days or the settlement may be approved as written. Objections should be filed with the North Carolina

Occupational Safety and Health Review Commission at:

North Carolina Occupational Safety and Health Review Commission

1101 Mail Service Center

Raleigh, North Carolina 27699-1101

You may also inspect all documents related to this contest at: **(EMPLOYERS, WRITE ON**

THE LINE BELOW THE LOCATION WHERE EMPLOYEES MAY VIEW

DOCUMENT BEFORE YOU POST THIS FORM.):

NCFS Haywood County office, Clyde, NC 28721

**AS AN AFFECTED EMPLOYEE, YOU HAVE THE RIGHT TO PARTICIPATE AS A
PARTY, BUT TO DO SO YOU MUST REQUEST SUCH STATUS BY CONTACTING THE
OFFICE ABOVE.**

FOR INFORMATION OR INSTRUCTIONS CONTACT: (919) 733-3589

**BEFORE THE NORTH CAROLINA OCCUPATIONAL SAFETY AND HEALTH
REVIEW COMMISSION
RALEIGH, NORTH CAROLINA**

**COMMISSIONER OF LABOR FOR
THE STATE OF NORTH CAROLINA**

COMPLAINANT,

v.

**N.C. DEPT OF AGRICULTURE & CONSUMER
SERVICES dba N.C. FOREST SERVICE
*and its successors***

RESPONDENT.

) **DOCKET NO.: OSHANC 2016-5814**
) **INSPECTION NO: 218057122**
) **CSHO ID.: C9882**

AUG 29 2017

**NC Occupational & Safety
CONSENT ORDER**

This cause comes on to be heard before the undersigned Hearing Examiner (the Court) and being heard upon consent of the parties hereto, upon consideration of the Stipulation and Notice of Settlement submitted by the parties (the Agreement), the Court makes the following:

FINDINGS OF FACT

1. That the Agreement is reasonable and supported by the underlying facts.
2. That no outstanding issues remain to be resolved by a hearing of this matter.

CONCLUSIONS OF LAW

1. This Court has jurisdiction over the parties to this action and over the subject matter.
2. That the Agreement is consistent with the purpose and objectives of the Occupational Safety and Health Act of North Carolina (The Act), and complies with Rule .0701 of the Rules of Procedure of the North Carolina Occupational Safety and Health Review Commission.

NOW, THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED:

1. That the Agreement is approved.
2. That both parties are hereby required to comply with the terms and conditions stipulated in the agreement.

This the 22nd day of AUGUST, 2017.



Richard M. Koch
Hearing Examiner

BY CONSENT:

JOSH STEIN
Attorney General



Larissa S. Williamson
Special Deputy Attorney General
North Carolina Department of Justice
P O Box 629 / Labor Section
Raleigh, North Carolina 27602
Telephone No. (919) 716-6680

ATTORNEYS FOR COMPLAINANT



Christopher R. McLennan
Assistant Attorney General
North Carolina Department of Justice
P.O. Box 629/ Services to State Agencies
Raleigh, North Carolina 27602
Telephone No. (919) 716-6507

ATTORNEY FOR RESPONDENT

CERTIFICATE OF SERVICE

**I HEREBY CERTIFY that I have this date served a copy of the foregoing
CONSENT ORDER upon:**

**CHRISTOPHER R. MCLENNAN
N. C. DEPARTMENT OF JUSTICE
P.O. BOX 629
SERVICES TO STATE AGENCIES
RALEIGH, NC 27602**

**LARISSA S. WILLIAMSON
NC DEPARTMENT OF JUSTICE
LABOR SECTION
PO BOX 629
RALEIGH NC 27602-0629**

by depositing a copy of the same in the United States Mail, First Class;

**NC DEPARTMENT OF LABOR
LEGAL AFFAIRS DIVISION
1101 MAIL SERVICE CENTER
RALEIGH NC 27699-1101**

by depositing a copy of the same in the NCDOL Interoffice Mail.

THIS THE 29 DAY OF August 2017.

**ARLENE K. EDWARDS
Chairman**



**Karissa B. Sluss
Docket and Office Administrator
NC Occupational Safety & Health Review Commission
1101 Mail Service Center
Raleigh, NC 27699-1101
Tel. (919) 733-3589
Fax: (919) 733-3020**

A G R E E M E N T

PURSUANT TO N.C. Gen. Stat. 150B-22 and 150B-41(c), which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, this agreement (hereinafter the "Agreement") is made and entered into effective as of the 4th day of January 2017 by and between the North Carolina Department of Agriculture and Consumer Services, Standards Division (hereinafter "NCDA&CS") and Eddie Brinson, Individually and d/b/a Brinson Farm (hereinafter "Mr. Brinson")

R E C I T A L S

WHEREAS, at all times pertinent to this matter, Mr. Brinson owned and operated Brinson Farm located at 994 Lyman Road, Beulaville, North Carolina 28518;

WHEREAS, since 2011 NCDA&CS has issued Mr. Brinson twenty-nine (29) civil penalties totaling One Hundred and Nineteen Thousand Three Hundred Dollars (\$119,300.00) for Mr. Brinson's violations of Article 5 (Liquefied Petroleum Gases) of Chapter 119 of the North Carolina General Statutes and rules promulgated thereunder;

WHEREAS, Mr. Brinson has corrected the violations for which NCDA&CS issued Mr. Brinson the twenty-nine (29) civil penalties and Mr. Brinson is now fully compliant with North Carolina Liquefied Petroleum Gas laws and rules;

WHEREAS, Mr. Brinson has paid Seven Thousand Two Hundred and Fifty Dollars (\$7,250.00) to NCDA&CS as payments towards the balance owed on the twenty-nine (29) civil penalties;

WHEREAS, in a good faith effort to settle this manner, Mr. Brinson has already made nine (9) consecutive monthly payments to NCDA&CS totaling Two Thousand Two Hundred and Fifty Dollars (\$2,250.00);

WHEREAS, with interest and late fees, Mr. Brinson has a remaining balance owed to NCDA&CS of One Hundred and Thirteen Thousand One Hundred and Sixty-Three Dollars and Thirteen Cents (\$113,163.13) on the twenty-nine (29) civil penalties;

WHEREAS, NCDA&CS and Mr. Brinson desire to fully and finally compromise and settle all disputes and controversies between them involving or arising out the twenty-nine (29) civil penalties referenced above; and

WHEREAS, NCDA&CS and Mr. Brinson desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of litigation.

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable

consideration, the receipt and sufficiency of which the parties hereby acknowledge, NCDA&CS and Mr. Brinson agree as follows:

1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by reference as if fully set forth herein.

2. By his signature below, Mr. Brinson agrees to pay the sum of Seven Hundred and Fifty Dollars (\$750.00) to NCDA&CS in three (3) payments of Two Hundred Fifty Dollars (\$250.00) each. These three (3) payments, along with the nine (9) consecutive monthly payments totaling Two Thousand Two Hundred and Fifty Dollars (\$2,250.00) that Mr. Brinson has already made to NCDA&CS, will constitute one full year in which Mr. Brinson has consistently made monthly payments to NCDA&CS in a good faith attempt to resolve this matter.

- a. Mr. Brinson's first payment of Two Hundred Fifty Dollars (\$250.00) shall be due on or before April 15, 2016.
- b. Mr. Brinson's second payment of Two Hundred Fifty Dollars (\$250.00) shall be due on or before May 15, 2016.
- c. Mr. Brinson's final payment of Two Hundred Fifty Dollars (\$250.00) shall be due on or before June 15, 2016.
- d. Mr. Brinson's payments will be mailed addressed as follows:

Standards Division
North Carolina Department of Agriculture and Consumer Services
Attention: Stephen Benjamin, Director Standards Division
1050 Mail Service Center
Raleigh, North Carolina 27699-1050

- e. Mr. Brinson's payments shall be considered to have been paid on time if Respondent sends the payment by U.S. Postal Service First Class Mail, or other commercial carrier, prepaid, and the envelope is postmarked on or before the date when the payment is due;

3. By its representative's signature below, NCDA&CS agrees that, if Mr. Brinson timely makes all of the payments as required in Paragraph 2 above and Mr. Brinson does not receive any additional civil penalties for violation(s) of North Carolina's Liquefied Petroleum Gas laws or rules for three (3) years (starting July 1, 2016), then, effective July 1, 2019, NCDA&CS will waive the remaining balance owed by Mr. Brinson on the twenty-nine (29) civil penalties referenced above. NCDA&CS further agrees that it will stay all collection attempts on the amounts owed by Mr. Brinson as a result of the twenty-nine (29) civil penalties so long as Mr. Brinson remains in compliance with the terms of this Agreement.

4. Mr. Brinson further acknowledges and agrees that he has signed the Statement Authorizing Confession of Judgment in the amount of One Hundred and Thirteen Thousand One Hundred and Sixty Three Dollars and Thirteen Cents (\$113,163.13), less any payments received, plus costs and interest at the State's legal rate attached to this Agreement as Exhibit 1, which is hereby incorporated by reference.

a. NCDA&CS hereby agrees that, so long as Mr. Brinson complies with the terms of this Agreement, NCDA&CS will not institute any civil action against Mr. Brinson to collect the sum of money owed pursuant to this Agreement and/or the twenty-nine (29) civil penalties referenced above.

b. NCDA&CS hereby agrees that, so long as Mr. Brinson complies with the terms of this Agreement, NCDA&CS will not file the Statement Authorizing Confession of Judgment that Mr. Brinson has executed and provided to NCDA&CS.

c. Mr. Brinson acknowledges and agrees that, if he fails to make any payment required under the terms of this Agreement, NCDA&CS may institute an action in Wake County Superior Court, and file the Statement Authorizing Confession of Judgment, in order to recover from Mr. Brinson the full One Hundred and Thirteen Thousand One Hundred and Sixty Three Dollars and Thirteen Cents (\$113,163.13), less any payments made, that Mr. Brinson owes to NCDA&CS under the twenty-nine (29) civil penalties referenced above. Furthermore, NCDA&CS agrees that if Mr. Brinson fails to make a payment on time pursuant to the terms of this Agreement, NCDA&CS will give Mr. Brinson notice of his failure to make said payment and three (3) business days to cure his breach by paying the amount due in full before filing the Statement Authorizing Confession of Judgment.

d. Mr. Brinson acknowledges and agrees that, if he receives a civil penalty for a violation of North Carolina's Liquefied Petroleum Gas laws or rules within three (3) years (starting July 1, 2016), NCDA&CS may institute an action in Wake County Superior Court, and file the Statement Authorizing Confession of Judgment, in order to recover from Mr. Brinson the full One Hundred and Thirteen Thousand One Hundred and Sixty Three Dollars and Thirteen Cents (\$113,163.13), less any payments made, that Mr. Brinson owes to NCDA&CS under the twenty-nine (29) civil penalties referenced above.

e. An action to recover any amount under this section shall not relieve any party from any other penalty permitted by law.

f. NCDA&CS further agrees that, once Mr. Brinson has made his final payment, and remained free from any civil penalties due to violation(s) of North Carolina's Liquefied Petroleum Gas laws or rules for three (3) years (starting July 1, 2016), in satisfaction of the terms of this Agreement, NCDA&CS shall provide to Mr. Brinson a document confirming receipt of payment and releasing Mr. Brinson from further liability under this Agreement and the twenty-nine (29) civil

penalties referenced above. NCDA&CS will also provide Mr. Brinson with the original Statement Authorizing Confession of Judgment, unless the original Statement Authorizing Confession of Judgment has already been filed by reason of Mr. Brinson's breach of this Agreement.

5. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referenced in this Agreement.

6. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

7. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

8. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed and signed by all signatories hereto.


9. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor or against any party based upon which party drafted or participated in drafting this Agreement.

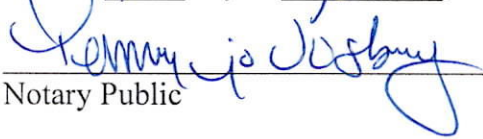
10. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

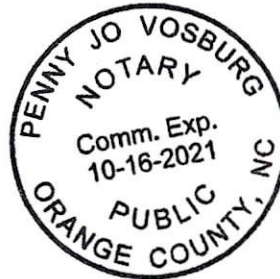
Agreement continues on the follow pages.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and signed as of the day and year indicated by their signatures below.

THE NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
STANDARDS DIVISION


By: 
Stephen Benjamin
Director, Standards Division
NCDA&CS

Subscribed and sworn to before me
this the 12th day of Jan., 2016. 2017

Notary Public

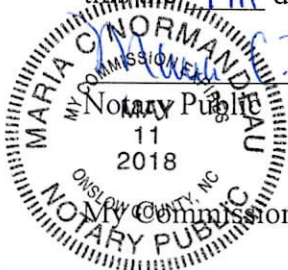


My Commission Expires: Oct. 16, 2021

EDDIE BRINSON

By: 
Eddie Brinson
Individually and d/b/a Brinson Farm
994 Lyman Road
Beulaville, North Carolina 28518

Subscribed and sworn to before me 2017
this the 4th day of January, 2016.




Notary Public
My Commission Expires: May 11, 2018

VERIFICATION

Eddie Brinson, being first duly sworn, deposes and says:

He has read the foregoing Statement Authorizing Confession of Judgment and the statements contained therein are true of his own knowledge, except for those matters and things stated therein upon information and belief, and as to those things, he believes them to be true.

Eddie Brinson

Eddie Brinson

Subscribed and sworn to before me this day by Eddie Brinson

This the 4th day of January, 2017.

Maria C. Normand

Signature of Notary Public



MARIA C. NORMAND

Printed Name of Notary Public

My commission expires: May 11, 2018

STATE OF NORTH CAROLINA

COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION

__ CVS __

**NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND
CONSUMER SERVICES,
STANDARDS DIVISION,**

Plaintiff,

v.

**EDDIE BRINSON, Individually and
d/b/a BRINSON FARM,**

Defendant.

**STATEMENT AUTHORIZING
CONFESSION OF JUDGMENT**

Eddie Brinson, Individually and d/b/a Brinson Farm, acting pursuant to Rule 68.1 of the North Carolina Rules of Civil Procedure, and having been duly sworn, hereby deposes and says:

1. Eddie Brinson, Individually and d/b/a Brinson Farm, is the Defendant in this matter and is a resident of Duplin County, North Carolina.
2. Plaintiff is the North Carolina Department of Agriculture and Consumer Services, Standards Division, which is an agency of the State of North Carolina organized pursuant to Chapter 106 of North Carolina General Statutes and headquartered in Wake County, North Carolina. Plaintiff is tasked by law with enforcing Chapter 119, Article 5 of the North Carolina General Statutes, N.C.G.S. § 119-54 *et seq.*
3. Defendant hereby confesses judgment in favor of Plaintiff and authorizes this Court to enter judgment against Defendant and in favor of Plaintiff in the amount of One Hundred and Thirteen Thousand One Hundred and Sixty Three Dollars and Thirteen Cents (\$113,163.13), less any payments made, plus costs and interest at the State's legal rate from the date of entry of this judgment until paid in full.
4. This confession of judgment is for an amount justly owed and Defendant is liable to Plaintiff in this amount pursuant to civil penalties lawfully issued by Plaintiff to Defendant due to Defendant's violations of North Carolina's Liquefied Petroleum Gas laws and rules. Additionally, this confession of judgement is justly owed pursuant to the terms of a Settlement Agreement lawfully entered into by the parties. In said Settlement Agreement, which is attached hereto and incorporated herein by reference. As part of the consideration exchanged in the Settlement Agreement, Defendant agreed to execute this confession of judgment in favor of

Plaintiff in the amount of One Hundred and Thirteen Thousand One Hundred and Sixty Three Dollars and Thirteen Cents (\$113,163.13).

This the 4th day of January, 201~~6~~¹⁷.

By:

Eddie Brinson

Eddie Brinson, Individually and
d/b/a Brinson Farm
Defendant

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

IN THE OFFICE OF
ADMINISTRATIVE HEARINGS
18 DAG 02248 & 18 DAG 03387

MR. PEDRO HERNANDEZ,
MS. ZENAIDA HERNANDEZ,
MR. FELICITO HERNANDEZ,

Petitioners,

v.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, MEAT & POULTRY
INSPECTION DIVISION,

Respondent.

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. 150B-22 and 150B-41(c), which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, this agreement (hereinafter the "Agreement") is made and entered into by and between Respondent, the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division (hereinafter the "NCDA&CS, MPID"), and Petitioners, Mr. Pedro Hernandez, Ms. Zenaida Hernandez, and Mr. Felicito (Phil) Hernandez (collectively hereinafter "Petitioners"), effective as of the date reflected by signature of Dr. Beth Yongue, Director of the NCDA&CS, MPID, appearing on page 9 of this Agreement.

RECITALS

WHEREAS, on or about April 29, 2013 Petitioners and NCDA&CS, MPID entered into a Settlement Agreement (hereinafter the "2013 Agreement") resolving a dispute surrounding a civil penalty that NCDA&CS, MPID issued to Petitioners due to alleged violations of North Carolina Meat Inspection and Poultry Products Laws (a copy the 2013 Agreement is attached as Appendix A to this Agreement);

WHEREAS, Petitioner Felicito Hernandez still owes NCDA&CS, MPID Three Thousand Six Hundred Dollars (\$3,600.00) under the terms of the 2013 Agreement;

WHEREAS, on February 19, 2018, NCDA&CS, MPID issued Petitioners a civil penalty in the amount of One Hundred and Twelve Thousand Dollars (\$112,000.00) (hereinafter the "First Civil Penalty") for alleged violations of North Carolina Meat Inspection and Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes) (a copy of the First Civil Penalty is attached as Appendix B to this Agreement);

WHEREAS, on April 3, 2018, NCDA&CS, MPID issued Petitioners a civil penalty in the amount of Twenty Five Thousand Dollars (\$25,000.00) (hereinafter the "Second Civil Penalty") for alleged violations of North Carolina Meat Inspection and Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes) (a copy of the Second Civil Penalty is attached as Appendix C to this Agreement);

WHEREAS, Petitioners deny the alleged violations in the First Civil Penalty and the Second Civil Penalty and deny that they have committed any violation of law;

WHEREAS, Petitioners timely appealed the First Civil Penalty by filing a Petition for a Contested Case Hearing with the North Carolina Office of Administrative Hearings (18 DAG 02248);

WHEREAS, Petitioners timely appealed the Second Civil Penalty by filing a Petition for a Contested Case Hearing with the North Carolina Office of Administrative Hearings (18 DAG 03387);

WHEREAS, NCDA&CS, MPID and Petitioners desire to fully and finally compromise and settle all disputes and controversies between them involving or arising out of the First Civil Penalty and the Second Civil Penalty;

WHEREAS, NCDA&CS, MPID and Petitioners desire to enter into such a compromise and settlement solely in order to avoid the burden and expense of litigation.

AGREEMENT

NOW THEREFORE, for and in consideration of, among other things, the promises contained herein, the representations, covenants and warranties contained herein, the obligations created hereby and the release(s) contained herein, as well as for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, NCDA&CS, MPID and Petitioners agree as follows:

1. The Recitals set forth above in this Agreement are hereby incorporated into this Agreement by reference as if fully set forth herein.

2. Petitioners agree to remove all meat slaughter and processing equipment, including, but not limited to the current scalding vat, from the premises located at 1919, 1941, 1942, 1945, and 1953 Dilling Farm Road, Charlotte, North Carolina 28214 within thirty (30) days of the effective date of this Agreement.

a. Petitioners shall provide NCDA&CS, MPID a written statement indicating where each item of equipment was sold or disposed of.

- b. Nothing in this Agreement shall prohibit Petitioners from retaining any equipment that will be lawfully used solely for the purpose of operating under the "Producer/Grower 20,000 Poultry Exemption" as outlined in Paragraph 11 of this Agreement.
- 3. Petitioners shall not return any meat slaughter or processing equipment to the premises located at located at 1919, 1941, 1942, 1945, or 1953 Dilling Farm Road, Charlotte, North Carolina 28214 without first receiving express written permission from NCDA&CS, MPID and doing so without such permission shall constitute a breach of this Agreement.
 - a. Nothing in this Agreement shall prohibit Petitioners from acquiring equipment that will be lawfully used solely for the purpose of operating under the "Producer/Grower 20,000 Poultry Exemption" as outlined in Paragraph 11 of this Agreement.
- 4. Petitioners will grant NCDA&CS, MPID inspectors access to any property they own, or have authority to grant right of access to, including but not limited to located at 1919, 1941, 1942, 1945, and 1953 Dilling Farm Road, Charlotte, North Carolina 28214, for a period of six (6) years following the effective date of this Agreement.
 - a. The right of access granted to NCDA&CS, MPID will be authorized solely for the purpose of conducting inspections into potential violations of North Carolina Meat Inspection and Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes).
 - b. The right of access granted to NCDA&CS, MPID shall specifically include all barns and out buildings in which meat or poultry slaughter, processing, or storage could occur.
 - c. The right of access granted to NCDA&CS, MPID shall not include building that are being used solely as residential dwelling places (i.e., bedrooms/living rooms in a house).
 - d. Petitioners will provide NCDA&CS, MPID a written list of all property that they own or have authority to grant right to access to within thirty (30) days of the effective date of this Agreement.
 - e. If Petitioners acquire new property for which they have the authority to grant right of access within six (6) years of the effective date of this Agreement, they shall notify NCDA&CS, MPID of the property within fifteen (15) days of acquiring the authority to grant right of access.
- 5. Petitioners agree that they shall not commit any future violations of North Carolina Meat Inspection Law or Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes) and acknowledge that doing so shall constitute a breach of this agreement.

6. Petitioner Felicito Hernandez agrees to pay NCDA&CS, MPID the entire Three Thousand Six Hundred Dollars (\$3,600.00) that remains due under the 2013 Agreement in a single payment.

- a. Petitioner Felicito Hernandez payment of Three Thousand Six Hundred Dollars (\$3,600.00) is due to NCDA&CS, MPID within thirty (30) days of the effective date of this Agreement.
- b. Petitioner Felicito Hernandez payment of Three Thousand Six Hundred Dollars (\$3,600.00) shall be mailed addressed as follows:

North Carolina Department of Agriculture and Consumer Services
Meat and Poultry Inspection Division
Attention: Dr. Beth Yongue, Director
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

- c. Petitioner Felicito Hernandez's payment shall be considered to have been paid on time if he sends the payment by U.S. Postal Service First Class Mail, or other commercial carrier, prepaid, and the envelope is postmarked on or before the date when the payment is due.

7. Petitioner Felicito Hernandez agrees to pay NCDA&CS, MPID, and NCDA&CS, MPID agrees to accept, Sixty One Thousand Dollars (\$61,000.00) in order to fully resolve any and all disputes involving the First Civil Penalty and the Second Civil Penalty.

- a. Petitioner Felicito Hernandez shall pay the Sixty One Thousand Dollars (\$61,000.00) in sixty on (61) payments of One Thousand Dollars (\$1,000.00) each.
- b. Petitioner Felicito Hernandez's first payment of One Thousand Dollars (\$1,000.00) shall be due on sixty (60) days from the effective date of this Agreement. Respondent's remaining payments, in the amount of One Thousand Dollars (\$1,000.00) each, shall be due on the first day of every subsequent month until the remaining balance is completely paid.
- d. Petitioner Felicito Hernandez payments of One Thousand Dollars (\$1,000.00) each shall be mailed addressed as follows:

North Carolina Department of Agriculture and Consumer Services
Meat and Poultry Inspection Division
Attention: Dr. Beth Yongue, Director
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

- e. Petitioner Felicito Hernandez's payments shall be considered to have been paid on time if he sends the payment by U.S. Postal Service First Class Mail, or other commercial carrier, prepaid, and the envelope is postmarked on or before the date when the payment is due.

8. As further evidence of good faith and as consideration for this Agreement, Petitioner Felicito Hernandez acknowledges that he has signed, before a Notary Public, a Confession of Judgment in the amount of Sixty One Thousand Dollars (\$61,000.00) in favor of NCDA&CS, MPID (a copy of the Confession of Judgment is attached as Appendix D to this Agreement).

- a. Petitioner Felicito Hernandez further acknowledges and agrees that if he fails to make any payment required under the terms of this Agreement, NCDA&CS, MPID may institute an action in Wake County Superior Court, and file the Confession of Judgment, in order to recover any unpaid amount under the terms of this Agreement. An action to recover any amount under this section shall not deprive NCDA&CS, MPID of any other remedies permitted by law against Petitioner Felicito Hernandez.
- b. NCDA&CS, MPID hereby agrees that, so long as Petitioner Felicito Hernandez complies with the terms of this Agreement, NCDA&CS, MPID will not institute any civil action against Petitioner Felicito Hernandez to collect the sum of money owed pursuant to this Agreement or file the Confession of Judgment Petitioner Felicito Hernandez has executed and provided to NCDA&CS, MPID.
- c. Furthermore, NCDA&CS, MPID agrees to file the Confession of Judgment only if Petitioner Felicito Hernandez fail to make a payment on time, pursuant to the terms of this Agreement, after giving Petitioner Felicito Hernandez notice of his failure to make said payment, and after allowing Petitioner Felicito Hernandez fifteen (15) business days to cure his breach by paying the amount due in full.
- d. NCDA&CS, MPID reserves the right to forgo filing the Confession of Judgment if it finds a good reason to refrain from doing so. However, if NCDA&CS, MPID in the sound exercise of its discretion refrains from filing the Confession of Judgment, it is not a waiver of its right to do so later.
- e. In the unexpected event of Petitioner Felicito Hernandez's death during this time in which he is still making payments pursuant to Paragraph 8 of this Agreement, if at the time of his death Petitioner Felicito Hernandez had not breached, and was in compliance with, the terms of this Agreement, then NCDA&CS, MPID will waive the remaining amounts owed. Nothing in this Agreement waives NCDA&CS, MPID's right to collect any amount owed from Petitioners' estates, successors, and/or assigns for any amount owed as a result of a breach of this Agreement.

- f. NCDA&CS, MPID further agrees that, once Petitioner Felicito Hernandez has made their final payment and NCDA&CS, MPID has received Sixty One Thousand Dollars (\$61,000.00) in satisfaction of the terms of this Agreement, NCDA&CS, MPID shall provide to Petitioner Felicito Hernandez a document confirming receipt of payment and releasing Petitioner Felicito Hernandez from further liability under this Agreement. At this time, NCDA&CS, MPID will also provide Petitioner Felicito Hernandez with the original Confession of Judgment, unless original Confession of Judgment has already been filed by reason of Petitioner Felicito Hernandez's breach of this Agreement.

9. If Petitioner Felicito Hernandez commits any violation of North Carolina Meat Inspection Law and/or Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes) during the time in which he is still making payments pursuant to Paragraph 7 of this Agreement, Petitioner Felicito Hernandez shall be immediately responsible for paying NCDA&CS, MPID the full sum of One Hundred and Thirty Seven Thousand Dollars (\$137,000.00) listed in the First and Second Civil Penalty, less any amount paid pursuant to Paragraph 7 of this Agreement prior to the violation.

10. Petitioner Pedro Hernandez and Petitioner Zenaida Hernandez are not financially responsible for any of the payments and/or potential payments agreed to by Petitioner Felicito Hernandez under the terms of this Agreement.

- a. If Petitioner Pedro Hernandez commits any violation of North Carolina Meat Inspection Law and/or Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes), or allows any such violation to occur on land that he owns, during the time in which Petitioner Felicito Hernandez is still making payments pursuant to this Agreement, then Petitioner Pedro Hernandez shall immediately become jointly and severally responsible for all sums owed by Petitioner Felicito Hernandez under this Agreement.
- b. If Petitioner Zenaida Hernandez commits any violation of North Carolina Meat Inspection Law and/or Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes), or allows any such violation to occur on land that she owns, during the time in which Petitioner Felicito Hernandez is still making payments pursuant to this Agreement, then Petitioner Zenaida Hernandez shall immediately become jointly and severally responsible for all sums owed by Petitioner Felicito Hernandez under this Agreement.

11. Nothing in this Agreement shall prohibit Petitioners from lawfully operating under the "Producer/Grower 20,000 Poultry Exemption," provided that Petitioners fully comply with all applicable laws and rules and operate in accordance with requirements of Appendix E to this Agreement, which is hereby incorporated by reference. Petitioners further acknowledge and agree that:

- a. Petitioners will not begin slaughtering, processing, or selling any poultry without first obtaining a written statement from NCDA&CS, MPID indicating that the premises where the slaughter/processing will occur, and the equipment that will be utilized, is sanitary.
- b. If Petitioners choose to operate under the "Producer/Grower 20,000 Poultry Exemption," Petitioners agree to keep accurate records documenting: the date and quantity of all poultry slaughtered and the date and quantity of all poultry sold. Petitioner further agrees to make these records available to NCDA&CS, MPID upon request and retain them for a period of three (3) years after the sale date.
- c. Nothing in this Agreement shall prohibit Petitioners from buying and utilizing an appropriate poultry scalding vat for use in accordance with the "Producer/Grower 20,000 Poultry Exemption."

12. Petitioners agrees to voluntarily dismiss their Petitions for Contested Case Hearings in North Carolina Office of Administrative Hearing File Nos. 18 DAG 02248 & 18 DAG 03387 with prejudice within thirty (30) days of the effective date of this Agreement.

13. An action to recover any amount under this Agreement shall not relieve any party from any other penalty permitted by law.

14. The parties agree to bear their own attorneys' fees and costs associated with this Agreement and with the matters referenced in this Agreement.

15. The persons signing this Agreement below represent and warrant that they have full authority and representative capacity to execute this Agreement in the capacities indicated below, and that this Agreement constitutes the valid and binding obligations of all parties.

16. The parties acknowledge that this Agreement contains the entire agreement between them regarding the matters set forth and described in it, and that it supersedes all previous negotiations, discussions and understandings between them regarding such matters.

17. The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed and signed by all signatories hereto.

18. The parties acknowledge and agree that any and all disputes arising out of or under this Agreement, whether sounding in contract, tort or otherwise and including, among all others, the validity, construction, interpretation and enforcement of this Agreement, shall be governed by North Carolina law. Despite the foregoing, the parties further acknowledge and agree that this Agreement shall not be interpreted in favor or against any party based upon which party drafted or participated in drafting this Agreement.

19. If any of the provisions of this Agreement are later determined to be invalid or unenforceable by a court of competent jurisdiction, the provisions found to be invalid or unenforceable shall be treated as being severable from the other provisions of this Agreement and

this Agreement shall be construed and enforced as if any such invalid or unenforceable provision(s) had not been included in the Agreement.

20. The parties attest that this Agreement is voluntarily made after ample opportunity to review the document with any individuals, advisors and counsel so desired.

21. This Agreement shall be binding upon the parties, their successors and assigns, upon execution by the undersigned, who represent and warrant that they are authorized to enter into this Agreement on behalf of the parties hereto.

22. Petitioners deny they are guilty of any violation of law and note that their consent to the terms of this Agreement is solely in order to timely resolve this matter. This Agreement shall not be constituted as an admission of guilt as to any of the alleged violations. However, NCDA&CS, MPID and Petitioners expressly acknowledge and agree that this Agreement does not purport to address or resolve any potential criminal liability for the alleged violations.

Agreement continues on the follow pages.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and consent to the terms contained therein by way of their signatures below.

PETITIONERS

Pedro Hernandez
Mr. Pedro Hernandez

7/24/18
Date

Zenaida Hernandez
Ms. Zenaida Hernandez

7/24/18
Date

Felicit Hernandez
Mr. Felicito Hernandez

7/24/18
Date

Each of the three signatures above was subscribed and sworn to before me this the 24 day of July, 2018.

Shawn A. Gregory
Notary Public

My Commission Expires: 10/22/22



RESPONDENT

Dr. Beth Yongue
Dr. Beth Yongue, Director
North Carolina Department of Agriculture
and Consumer Services, Meat and Poultry
Inspection Division

August 2, 2018
Date

Subscribed and sworn to before me this the 2 day of August, 2018.

Linda M. Oltz
Notary Public



My Commission Expires: 1/31/2021

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

IN THE OFFICE OF
ADMINISTRATIVE HEARINGS
12 DAG 07297

PEDRO HERNANDEZ,
ZENaida HERNANDEZ,
FELICITO HERNANDEZ,
Petitioners,

v.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, MEAT & POULTRY
INSPECTION DIVISION,

Respondent.

SETTLEMENT AGREEMENT

RECITALS

Pedro Hernandez, Zenaida Hernandez and Felicito Hernandez (aka Phil Hernandez) (the "Petitioners") and the North Carolina Department of Agriculture and Consumer Services (the "Respondent") desire to fully and finally settle this and all other disputes and controversies surrounding the Petitioner's operation of an unlicensed slaughter facility and desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

Whereas, the Respondent received anonymous information on or about July 12, 2011, alleging that there was a non-inspected slaughter and/or processing operation being conducted at 1945 Dilling Farms Road, Charlotte, North Carolina. On July 23, 2011, Respondent's Food Compliance Officer Percy Russell (hereinafter FCO Russell) conducted surveillance at the property located at 1945 Dilling Farms Road, Charlotte, North Carolina, which he determined belonged to Petitioners Pedro and Zenaida Hernandez. FCO Russell observed vehicles entering and leaving the property location of the alleged non-inspected slaughter and/or processing facility.

Whereas, on August 27, 2011, Respondent's Food Inspector Jose Romero (hereinafter FI Romero), while posing as a member of the general public, went to 1945 Dilling Farm Road,

Charlotte, North Carolina, and purchased two (2) pounds of pork ribs, one (1) pound of stew meat, six (6) pounds of pork lungs (per 9 CFR § 310.16(a) livestock lungs are not to be saved for use as human food), a pork heart, a pork liver, a beef kidney, and one slaughtered and processed chicken (hereinafter 8/27/2011 purchase). FI Romero paid a total of \$59.00 in cash for the meat and poultry products which were packaged in five white plastic bags.

Whereas, FI Romero then transferred the five white plastic bags comprising the 8/27/2011 purchase and their contents to FCO Russell, following the Respondent's chain of custody procedures. FCO Russell took possession of the bags, photographed them and examined them and their contents.

Whereas, when FCO Russell examined the five white plastic bags he found that they bore no North Carolina Department of Agriculture & Consumer Services ("NCDA&CS") or United States Department of Agriculture ("USDA") marks of inspection or labeling.

Whereas, FCO Russell examined and photographed the contents of the five white plastic bags, finding that the meat pieces bore no NCDA&CS or USDA marks of inspection and several meat pieces had signs of adulteration: feces on pork meat and pork lung that was unfit for human consumption as food.

Whereas, FCO Russell examined the chicken meat and found it bore no NCDA&CS or USDA marks of inspection. The chicken meat showed signs of adulteration: viscera still attached to the chicken carcass.

Whereas, FCO Russell transferred the 8/27/2011 purchase, the five white plastic bags and their contents, to storage in the Respondent's Raleigh Compliance office, following Respondent's chain of custody procedures.

Whereas, on October 14, 2011, Respondent's Food Compliance officers Melanie Pollard ("FCO Pollard") Daniel Moody, Jr. ("FCO Moody") and FCO Russell, accompanied by members of the Charlotte/Mecklenburg Police Department, executed a search warrant on the

property owned by Mr. Pedro Hernandez and Ms. Zenaida Hernandez at 1945 Dilling Farm Road, Charlotte, NC, for the purpose of investigating the slaughtering, processing and selling of misbranded, non-inspected and adulterated meat and poultry products to the general public.

Whereas, when the FCOs announced that they were present to execute this search warrant, Mr. Felicito Hernandez, 624 Trailing Rock Drive, Charlotte, NC, voluntarily stated that he was in charge of the non-inspected slaughtering and processing operation.

Whereas, upon entering the property, FCOs Russell, Moody and Pollard observed, photographed and shot video of a wooden building located there, with live animals: twelve sheep; forty-five goats; eleven cattle; sixty-six hogs; and eighty chickens.

Whereas, Respondent's FCOs also found a roofed, open-sided structure that was serving as a slaughter area, containing a stainless steel table and a white metal bathtub with a propane tank and burner system attached to it. The propane tank and burner system indicate that the tub was used as a scalding vat for pigs.

Whereas, adjacent and attached to the slaughter area was a holding pen containing three pigs.

Whereas, attached to the slaughter area was a wooden building that was approximately twenty feet long and twenty feet wide. The FCOs observed signs that the building was being used for processing slaughtered animals and storing non-inspected meat and poultry being offered for sale and sold to the general public. The building contained a commercial cooler with three glass doors, four household-type chest freezers and one household type refrigerator-freezer. All of these contained non-inspected, misbranded and/or adulterated packaged meat from goats, sheep, pork or beef being offered for sale to the general public.

Whereas, FCOs Russell, Moody and Pollard counted eight-five packages of non-inspected and/or adulterated meat products in the cooler, freezers and refrigerator in the wooden building, and estimated the total weight of the meat products to be nine hundred and forty (940)

pounds. They tagged the meat products as detained, numbers 4110 through 4115, and photographed the packages.

Whereas, FCO's Russell, Moody and Pollard opened and examined the packages and found non-inspected or misbranded meat products from goats, sheep, cattle and swine. Much of the meat products were adulterated with fecal material.

Whereas, Mr. Felicito Hernandez voluntarily destroyed the estimated 940 lbs. of detained meat products while the FCOs observed and photographed him doing so.

The FCOs went into the processing room and found a meat band saw, a one compartment stainless steel sink with an attached water hose, ten plastic containers, several meat scales, one scalding water tank (used for processing chickens), one wooden cutting block, a wooden table, several knives, and one metal cone used for slaughtering chickens.

Whereas, when the FCOs continued to execute the search warrant, they observed Mr. Felicito Hernandez slaughtering and processing chickens for offering for sale to the general public.

Whereas, the FCOs observed several unsanitary conditions capable of causing direct adulteration of meat products:

- a. the meat band saw contained meat particles from a previous day's use;
- b. blood, bones, hooves and horns were left on the floor from a previous day's slaughtering/processing activity;
- c. the equipment, tables and buildings showed no signs of routine cleaning or sanitizing;
- d. the processing table next to the killing floor was topped with a white cutting board which was discolored and deeply scored with knife marks;
- e. the stainless steel processing table next to the killing floor had a build-up of dried blood residue and animal hair from a previous day's slaughter on its surface;

- f. there was no source of hot water in the building,
- g. there was no device to sanitize knives in the building;
- h. the bathtub used as a scalding vat had a built-up layer of an unidentified black substance and animal hair on the surface from a previous day's use;
- i. a bag containing Kevlar gloves had a heavy build-up of dirt, grime and meat particles on its surface from a previous day's use;
- j. the knives used for processing meat had a build-up of dried blood and animal hair on the surface area from a previous day's use.

Whereas, upon inspecting the south end of the Hernandez' property, 1945 Dilling Farm Road, Charlotte, North Carolina, an area comprised of approximately five acres, the FCOs observed freshly-dug holes. When they examined these holes, they found internal organs, heads and bones typically left over after the slaughter of animals in a non-inspected slaughter and processing facility. They saw one partially-decomposed calf in one hole and a second partially-decomposed calf in a second hole near the south end of the property.

Whereas, the FCOs issued Mr. Felicito Hernandez an "on-site" cease and desist letter concerning his sale of non-inspected/misbranded/adulterated meat and poultry products. Mr. Felicito Hernandez voluntarily admitted that he had been slaughtering, processing and selling meat and poultry products to the general public for three years.

Whereas, the FCOs seized three ledger books found inside the non-inspected slaughter/processing facility. The ledger books contained the names and/or telephone numbers of customers, including restaurants and dated entries of the dollar amounts paid for purchases.

Whereas, on October 26, 2011, FCO Russell and Mr. Matt Hood, Mecklenburg County Environmental Health Specialist, visited A Piece of Havana Restaurant, 11126 South Tryon Street, Charlotte, NC, ("APOHR") a possible purchaser of non-inspected meat products from the Hernandez's non-inspected facility. During the visit they received a signed statement from Mr.

Carlos Alvarez, co-owner of APOHR, stating that he purchased three whole pigs from Mr. Felicito Hernandez at the slaughter/processing facility at 1945 Dilling Farm Road, Charlotte, NC, for his personal use, in September, 2011, but did not bring the three whole pigs into APOHR. Mr. Alvarez stated that the pigs he purchased from Mr. Felicito Hernandez did not have a NCDA&CS or USDA mark of inspection;

Whereas, on June 21, 2012, Respondent issued to the Petitioners a civil penalty assessment finding that Petitioners had been found to be slaughtering, processing, storing, offering for sale and selling non-inspected/misbranded and/or adulterated meat and poultry products to the general public and improperly disposing of dead domesticated animals in violation of N.C. General Statutes §§ 106-549.17, 106-549.23, 106-549.53, 106-549.56, and 106-403;

Whereas, in its civil penalty assessment, Respondent imposed upon the Petitioners civil penalties:

\$20,000.00 for violation of N.C. General Statutes § 106-549.23(3)a (Misbranded Meat);

\$14,000.00 for violation of N.C. General Statutes § 106-549.23(3)b (Not Inspected Meat);

\$15,000.00 for violation of N.C. General Statutes § 106-549.23(3)a (Adulterated Meat);

\$3,000.00 for violation of N.C. General Statutes § 106-549.56(2)a (Adulterated Poultry);

\$4,000.00 for violation of N.C. General Statutes § 106-549.23(1)a (Prohibited Slaughter);

\$2,000.00 for violation of N.C. General Statutes § 106-549.53(a) (Inspection before Slaughter - Poultry);

\$2,000.00 for violation of N.C. General Statutes § 106-549.56(2)a (Misbranded Poultry);

\$2,000.00 for violation of N.C. General Statutes § 106-549.56(2)b (Not Inspected Poultry);

\$4,000.00 for violation of N.C. General Statutes § 106-549.17a (Inspection before Slaughter/ Meat);

\$2,000.00 for violation of N.C. General Statutes § 106-403 (Disposition of Dead Domesticated Animals);

Whereas, the sum of the civil penalty assessment was \$68,000.00; and

Whereas the Petitioners deny they are guilty of any willful violation of the above-referenced laws and regulations and their consent to the terms of this Agreement is made in order to timely resolve this matter and shall not be constituted as an admission of guilt, as to any of the violations alleged herein.

WHEREAS the parties desire to resolve these matters without further litigation.

NOW THEREFORE, the parties agree as follows:

- 1) Whereas, within ten days (10) of the date both sides have signed this formal written settlement agreement, Petitioners shall remove or cause to be removed all equipment and other items (hereinafter, "equipment") that can be used for the slaughter and/or processing of animals for human consumption, except for the following items:
 - a. The hog scalding vat (appears to be a repurposed bath tub; investigation photo no. 18);
 - b. The commercial meat-cutting band saw (investigation photo no. 12); and
 - c. The chicken slaughtering/processing equipment (investigation photo no. 14).
- from 1945 Dilling Farm Road, Charlotte, NC, and all such items will be disposed of in a lawful fashion by sale or disposal in a landfill or other appropriate facility within forty-eight hours after removal. Removal of the equipment from the building will

take place in the presence of the Respondent's designated representative. If the equipment is sold, Petitioner shall provide the Respondent with the name and address of the person or company purchasing it within twenty-four hours of delivering the equipment to the purchaser. The parties further understand and agree that Petitioners may use the three listed items of equipment mentioned above only for the slaughtering or processing of animals of their own raising, and the preparation by them and transportation in intrastate commerce of the carcasses, parts thereof, meat and meat food products of such animals exclusively for use by them and members of their households and their nonpaying guests and employees, as provided in N.C. Gen. Stat. § 106-549.27(a)(1);

- 2) Petitioner Felicito Hernandez hereby agrees to pay the sum of fifty-four thousand dollars (\$54,000.00) to the Respondent as consideration for this settlement agreement. The parties agree and acknowledge that the Respondent is required by law to turn said payment over to the Department of Public Instruction. Petitioner may pay this sum in sixty-seven monthly installments of eight hundred dollars (\$800.00) and a final payment of four hundred dollars (\$400) due on the 18th day of each month, beginning on that date of the month following the month in which all of the parties to this Settlement Agreement have executed it. A monthly payment is late and the Petitioners are in breach of this Settlement Agreement if payment is received after 5:00 p.m. of the date due. Receipt of payment in an envelope postmarked or otherwise dated by commercial courier or the U.S. Postal Service on or before the date due, which is received after the date due, shall be deemed to be on time;
- 3) As further consideration Petitioners Felicito Hernandez and Pedro Hernandez have signed Appendix A, a Confession of Judgment in favor of the Respondent for the sum of fifty-four thousand dollars (\$54,000.00). The Respondent shall not file said

Confession of Judgment with the Court unless the Petitioner Pedro or Petitioner Felicito Hernandez violates this settlement agreement by:

- a. Failing to pay the \$54,000.00 within the time and according to the terms provided in this Settlement Agreement (applicable to Felicito Hernandez, only);
 - b. Failing to remove the equipment from 1945 Dilling Farm Road, Charlotte, NC, by the deadline stated herein, unless Respondent finds that there is a good reason to grant the Petitioners additional time in which to do so;
 - c. Returning the equipment or other items to 1945 Dilling Farm Road, Charlotte, NC, that, in the opinion of the Respondent's compliance officers, enables the Petitioners to conduct unlicensed, uninspected slaughter there again; or
 - d. Committing another violation of the laws and/or rules enforced by the Meat and Poultry Inspection Division, specifically but not limited to Articles 49B and 49C of the North Carolina Mandatory Meat and Poultry Inspection Law.
- 4) Respondent may deem Petitioners Felicito Hernandez and Pedro Hernandez to be in breach of this Settlement Agreement upon finding:
- e. Petitioner Felicito Hernandez has failed to make timely payment; if Petitioner Felicito Hernandez finds he lacks sufficient funds to make a monthly payment, he shall notify the Respondent before payment is due and request that the payment be rolled over to the next month.
 - f. The following month Petitioner Felicito Hernandez shall bring his payments up to date (paying double the usual monthly payment) unless he has received permission from the Respondent to pay less than double the monthly payment, \$1,600.00.

- g. Failure to make payment in full each month without prior notification to the Respondent shall constitute a material breach of this Settlement Agreement;
 - h. If the Respondent files the Confession of Judgment for such breach or any other breach of this Settlement Agreement, it shall not excuse Petitioner Felicito Hernandez from his continuing obligation to make monthly payments.
 - i. When it files the Confession of Judgment, the judgment shall reflect and give credit for payments made up to date of filing of the Confession of Judgment against the amount of \$68,000.00.
 - j. There is no interest charged on the unpaid balance and no penalty for early payment.
- 5) Respondent hereby reserves the right to forego filing Appendix B, the Confession of Judgment, against the Petitioners if it finds a good reason to refrain from doing so. However, if Respondent in the sound exercise of its discretion refrains from filing Appendix B, this is not a waiver of its right to do so later;
- 6) Petitioners have, contemporaneously with their execution of this Settlement Agreement, signed a Dismissal with Prejudice of the above-captioned case in the North Carolina Office of Administrative Hearings, waiving their right to a hearing on the Respondent's Civil Penalty Assessment made against them;
- 7) Petitioners Felicito, Pedro and Zenaida Hernandez hereby agree not to offer any land that they own, rent, or control, together or separately, as a place to slaughter and/or process animals for food, except as provided by law for animals of their own raising, to be fed to their family, employees or non-paying guests;

- 8) Petitioners do hereby promise and grant to the Respondent the right to enter the property located at 1945 Dilling Farm Road, Charlotte, NC, and all other properties that they currently own, either jointly or individually, lease or have use of. Petitioners shall, within five days after Petitioners' execution of this Settlement Agreement, provide to the Respondent a list of all the properties they currently own, lease or have use of, both jointly or individually, including the properties' street address or gps coordinates. Petitioners shall provide to the Respondent a list of all said properties, Appendix B, which is attached hereto and incorporated herein by reference. Respondent's right to enter and to inspect those properties and their buildings shall be without notice, at any time (24/7). Petitioners further promise and agree that, upon purchasing, leasing or otherwise receiving the use and/or control of any other parcels of land in the State of North Carolina after their execution of this agreement, they shall:
- k. notify the Respondent within forty-eight hours of receiving access to or control of said parcels of land;
 - l. grant Respondent the same right of entry and inspection thereto; and
 - m. provide the Respondent with the newly acquired land parcel's address or gps coordinates.
- 9) Respondent hereby agrees that the right to conduct such inspections shall not include the right to enter and inspect any building on any of the properties mentioned herein that are used solely as human habitation; and
- 10) At the first possible date but no later than thirty (30) days after his execution of this Settlement Agreement, Petitioner Felicito Hernandez shall apply for and receive a livestock dealer's license from the Veterinary Division of the N.C. Department of Agriculture and Consumer Services, and comply with all laws and rules applicable to

livestock dealers. Further, Petitioner Felicito Hernandez agrees that, upon demand, he shall permit the Respondent's employees and agents to inspect and copy all records he maintains in the course of livestock dealing.

11) Petitioners further agree not to commit any other violations of the North Carolina Meat and Poultry Inspection Law, articles 49B, 49C and 49H.

In return, the Respondent hereby agrees as follows:

- 1) Respondent accepts fifty-four thousand dollars (\$54,000.00) in compromise of its civil penalty assessment in order to settle this matter;
- 2) Respondent hereby releases Petitioner Ms. Zenaida Hernandez from personal liability and responsibility for the violations described above and from any obligation to pay the civil penalty assessed against her, her spouse, Petitioner Pedro Hernandez, and her son, Petitioner Felicito Hernandez;
- 3) Respondent agrees not to file Petitioners' Confession of Judgment, Appendix A, unless Petitioner Pedro Hernandez or Petitioner Felicito Hernandez violates this Settlement Agreement;
- 4) Respondent hereby agrees that, if Petitioners comply with the Settlement Agreement completely and commit no violations of the North Carolina Meat and Poultry Inspection Law for from the date the Settlement Agreement is signed by both parties and for sixty-eight months thereafter, the Respondent will return the original Confession of Judgment to the Petitioners for cancellation;
- 5) In the alternative, if, following signing and execution by both parties of the Settlement Agreement, either of the Petitioners:
 - n. applies for a license to operate a custom slaughter facility; and
 - o. receives a license to operate a custom slaughter facility; and

- p. opens a licensed custom slaughter facility; and
- q. continues to operate a licensed custom slaughter facility for one year after receiving that license,

the Respondent will return the original Confession of Judgment to you for cancellation;

6) Upon receipt of the final payment bringing Petitioner Felicito Hernandez payments up to \$54,000.00, the Department shall surrender Appendix A, the original of Petitioner's Confession of Judgment, to either Petitioner Felicito Hernandez or to Petitioner Pedro Hernandez or to their legal counsel, unless Appendix A has been filed with the Clerk of Court of the county in which Petitioner Felicito Hernandez or Petitioner Pedro Hernandez resides.

The parties mutually agree to act in good faith in the implementation of this agreement. The parties agree to bear their own attorneys fees and costs. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates indicated below:

PETITIONER


PEDRO HERNANDEZ

Date: 4/29/13


FELICITO HERNANDEZ


Date: 4/29/13

ATTORNEY FOR PETITIONERS


JOSEPH LEDFORD

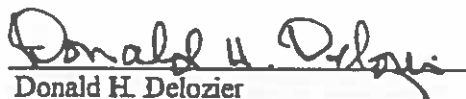
Date: 4.29-13

ATTORNEY FOR RESPONDENT


Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: April 30, 2013

FOR RESPONDENT:


Donald H. Delozier
Director, Meat and Poultry Inspection Division
North Carolina Department of Agriculture & Consumers Services

Date: April 30, 2013

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
Case No.: _____

PEDRO HERNANDEZ,
ZENaida HERNANDEZ,

Petitioners,

V.

NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND CONSUMER
SERVICES, MEAT & POULTRY
INSPECTION DIVISION,

Respondent.

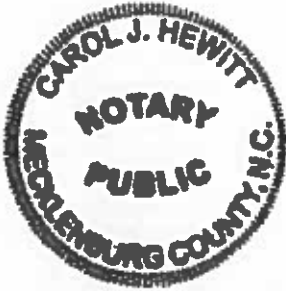
JUDGMENT


Defendants now depose and say that they are residents of Mecklenburg County, North Carolina, and authorizes the Court to enter judgment in favor of Plaintiff in the sum of fifty-four thousand dollars (\$54,000.00), with interest from _____, 2013.

Defendants may become liable to Plaintiff in this amount because they entered into a Settlement Agreement with Plaintiff on _____, 2013, to settle and resolve litigation of the case captioned Felicito Hernandez, Pedro Hernandez and Zenaida Hernandez v. N.C. Department of Agriculture and Consumer Services, case no. 12 DAG 07297, before the North Carolina Office of Administrative Hearings. Defendants brought that case against the Plaintiff to contest the Plaintiff's issuance of a civil penalty assessment against the Defendants for having operated an unlicensed, uninspected animal slaughter and processing facility in violation of the N.C. Mandatory Meat Inspection Law, and for improper disposal of a dead domesticated animal, upon discovering Defendants' use of Defendant Pedro Hernandez' property and buildings for those purposes on August 27, 2011.

The Parties resolved the matter before the N.C. Office of Administrative Hearings pursuant to the above-referenced Settlement Agreement, which is attached hereto and incorporated by reference. In said Settlement Agreement the Defendants promised to comply with the referenced statutes and regulations by rendering the property and buildings unsuitable for the slaughter and processing of animals for food. Defendants also agreed in said Settlement Agreement to execute this Judgment in favor of the Plaintiff. As full and fair consideration for said promises and actions, the parties agreed that the Plaintiff would not file and execute upon this Judgment unless and until it found that the Defendants, either individually or jointly, had violated the North Carolina Mandatory Meat Inspection laws or otherwise failed to comply with the terms and obligations of said Settlement agreement.


On _____, 20____, Plaintiff's officers discovered that _____ Defendant Felicito Hernandez or _____ Defendant Pedro Hernandez had failed to meet his obligations under said Settlement Agreement by committing the violations set forth in the report issued by the Plaintiff, which is attached hereto and incorporated by reference.




Defendant Pedro Hernandez


Defendant Felicito Hernandez

Sworn to and subscribed before
me this 29th day of April, 2013.


Notary Public

Upon the foregoing confession of judgment, IT IS THEREFORE ORDERED that judgment is entered for Plaintiff against Defendants in the sum of fifty-four thousand dollars (\$54,000.00), with interest to run from _____, 2013, together with the costs in the sum of \$ _____. Said judgment amount is reduced and Defendant is given credit for payment of the sum of \$ _____, which Plaintiff hereby acknowledges receipt of prior to filing of this Confession of Judgment.

This the _____ day of _____, 20____.

Clerk of Court



Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Meat and Poultry Inspection Division

Dr. Beth Yongue
State Director

February 19, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
1945 Dilling Farm Road
Charlotte, NC 28214

Mr. Felicito Phillip Hernandez
624 Trailing Rock Road
Charlotte, NC 28214

**RE: CIVIL PENALTY ASSESSMENT FOR VIOLATIONS
OF THE MEAT INSPECTION LAWS AND POULTRY PRODUCTS INSPECTION LAWS
G.S. § 106-549.17, 106-549.23 and 106-549.56.**

Dear Mr. Pedro Hernandez, Ms. Zenaida Hernandez, Mr. Felicito Phillip Hernandez,

Pursuant to North Carolina General Statute (G.S.) 106-549.35(c) and (G.S.) 106-549.59(a1) this letter is notice of a civil penalty by the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division (NCDA&CS). The civil penalty assessment document is attached.

Within 60 days from the date of receipt, you must do one of the following:

1. Pay the civil penalty assessment; or
2. File a written petition for a contested case hearing in the Office of Administrative Hearings appealing the penalty assessment.

Pursuant to G.S. §150B-22, informal settlement negotiations may be initiated at any time. To negotiate a settlement of this assessment, present your offer to Dr. Beth Yongue, Director, Meat & Poultry Inspection Division, who may be contacted by telephone at (919) 707-3180. Settlement offers do not extend the 60 day deadline for payment or filing of a contested case petition.

Additional information about your options is provided below:

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicitó Phillip Hernandez
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-PAYMENT-

To pay the penalty, please send your payment by check or money order made payable to the North Carolina Department of Agriculture and Consumer Services to:

North Carolina Department of Agriculture and Consumer Services
Dr. Beth Yongue, Director
Meat & Poultry Inspection Division
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

-APPEAL-

If you file a contested case petition, it must be in writing and in the form prescribed by G.S. § 150B-23. File the petition and one copy with:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, North Carolina 27699-1001

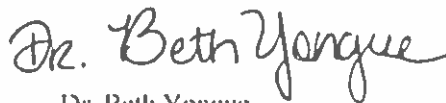
Any questions about filing a petition may be directed to the Clerk of OAH by telephone (919) 733-0926. You must serve NCDA&CS by mailing a copy of the petition to:

Ms. Tina Hlabse
North Carolina Department of Agriculture and Consumer Services
Process Agent and General Counsel
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

Payment of the penalty will not foreclose further enforcement action against you for any new violation. If the violations which resulted in the assessment are of a continuing nature, NCDA&CS reserves the right to assess additional civil penalties in the future or take other enforcement action against you.

Your attention to this matter is appreciated.

Sincerely,



Dr. Beth Yongue
Director, Meat & Poultry Inspection Division

MEY:dm

Attachments: Assessment Document

CC: Mr. Chris McLennan, Assistant Attorney General
Mr. Joe Reardon, Assistant Commissioner
Ms. Tina Hlabse, General Counsel

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicito Phillip Hernandez
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STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE & CONSUMER SERVICES
MEAT & POULTRY INSPECTION DIVISION

IN THE MATTER OF)

Mr. Pedro Hernandez)
Ms. Zenaida Hernandez)
Mr. Felicito Hernandez)

FOR VIOLATIONS OF THE N.C. COMPULSORY)
MEAT INSPECTION LAW AND N.C. POULTRY)
POULTRY PRODUCTS LAW)
G.S. § 106-549.17, § 106-549.23(1), § 106-549.23(3)(a))
§ 106-549.23(3)(b) & 106-549.56(a)(2))

NOTICE OF VIOLATIONS
AND ASSESSMENT OF
CIVIL PENALTY

Acting pursuant to North Carolina General Statute (G.S.) § 106-549.35(c), § 106-549.17, § 106-549.23(1), § 106-549.23(3)(a), § 106-549.23(3)(b) and § 106-549.56(a)(2) Dr. Beth Yongue, Director, Meat and Poultry Inspection Division of North Carolina Department of Agriculture and Consumer Services (NCDA&CS) makes the following:

I. FINDINGS OF FACTS:

- A. This investigation is a result of anonymous information received alleging that there was a non-inspected slaughter/processing operation being conducted at 1945 Dilling Farm Road, Charlotte, NC.
- B. On October 14, 2017, a confidential informant, while posing as a member of the general public, went to 1945 Dilling Farm Road, Charlotte, NC also known as Big H Farms, where an apparent non-inspected slaughter and processing operation appeared to be in full operation, without the benefit of NCDA (State) or USDA (Federal) inspection.
- C. After arriving at the property, the confidential informant, spoke with a farm employee and requested to purchase some goat meat. The farm employee then began removing the hair, from a goat that was killed prior to the confidential informant's arrival, by burning the hair off with a blowtorch. The employee then eviscerated the animal (goat carcass) and cut off approximately six (6) pounds of the goat meat (ribs and skin attached) and placed/package the goat meat into a small non-food grade plastic bag. The non-food grade plastic bag stated the following: "Have A Nice Day", "Thank You" and the bag contained a large yellow smiley face.
- D. On October 14, 2017, the confidential informant also observed a large bull carcass, the bull was killed prior to the confidential informant's arrival, hanging from a forklift. The confidential informant asked the farm employee if he could purchase approximately three (3) pounds of the beef meat.

- E. On October 14, 2017, the confidential informant, paid six (6) dollars per pound for the goat meat a total of \$36.00 and the informant paid \$10.00 for three (3) pounds of beef meat. The goat meat and beef meat came to a total of \$46.00.**
- F. The non-inspected, misbranded and/or adulterated meat products were transferred from the confidential informant to Compliance Officer Philip Renshaw (hereinafter, CO Renshaw, respectively) relevant to chain of custody proceedings.**
- G. Upon taking custody of the non-inspected, misbranded and/or adulterated meat products, CO Renshaw examined and photographed the contents and saw no NCDA (State) or USDA (Federal) marks of inspection and several signs of adulteration which included a speckled black substance and a small amount of hair on the non-inspected/misbranded goat meat.**
- H. CO Renshaw transferred the above mentioned non-inspected, misbranded and/or adulterated meat products to the MPID Raleigh Compliance Office, following the Division chain of custody procedures.**
- I. On October 28, 2017, the confidential informant, while posing as a member of the general public, visited the property of Big H Farms, 1945 Dilling Farm Road, Charlotte, NC 28214 for a second undercover purchase. At the time the confidential informant arrived on the property of Big H Farms there appeared to be a non-inspected slaughter and processing operation in full operation, without the benefit of NCDA (State) or USDA (Federal) inspection for the general public.**
- J. After arriving at the property, the confidential informant, observed a beef carcass hanging from the back of a tractor (this animal was slaughtered prior to the confidential informant's arrival), and spoke with a farm employee to purchase part of the animal's stomach.**
- K. After the confidential informant spoke with the farm employee, the employee of Big H Farms walked up to the beef carcass that was hanging from the tractor (that was slaughtered without the benefit of NCDA or USDA inspection) and cut out/removed part of the stomach from the eviscerated carcass. The viscera/stomach was lying on the concrete floor when the farm employee removed it for the confidential informant. The farm employee in-turn emptied the loose stomach digestive contents out the stomach, briefly sprayed it with a water hose (approximately 5 pounds of stomach) and then packaged it into a small non-food grade plastic bag. The non-food grade plastic bag stated the following: "Have A Nice Day", "Thank You" and the bag contained a large yellow smiley face.**
- L. On October 28, 2017, the confidential informant, was charged and paid \$20.00 for the non-inspected, misbranded and adulterated beef stomach.**

- M. The non-inspected, misbranded and/or adulterated meat products were transferred from the confidential informant to CO Renshaw relevant to chain of custody proceedings.
- N. Upon taking custody of the non-inspected, misbranded and/or adulterated meat products, CO Renshaw examined and photographed the contents and saw no NCDA (State) or USDA (Federal) marks of inspection and several signs of adulteration which included a large amount of fecal material and/or ingesta attached to the beef stomach. The confidential informant stated that the meat product had a strong off smell to it at the time the non-inspected, misbranded and adulterated beef stomach was placed into the non-food grade plastic bag.
- O. CO Renshaw transferred the above mentioned non-inspected, misbranded and/or adulterated meat products to the MPID Raleigh Compliance Office, following the Division chain of custody procedures.
- P. On January 20, 2018, NCDA & CS, MPID, Compliance Officer Philip Renshaw (hereinafter, CO Renshaw, respectively), Compliance Officer Jake Groce (hereinafter, CO Groce, respectively) and Compliance Officer Daniel Moody (hereinafter, CO Moody, respectively), along with members of the Mecklenburg County Sheriff's Office: Captain D. Belk, Sergeant G. Headon, Deputy A. Stitt, Deputy D. Frazier, Deputy N. Davie, Deputy E. Elmendorf, Deputy B. Daniels, Deputy D. Davis, Deputy G. Baker, Deputy C. Pettis, and Deputy R. Poe, executed an administrative inspection warrant at the property owned by Mr. Pedro Hernandez and Ms. Zenaida Hernandez, 1945 Dilling Farm Road, Charlotte, NC, on behalf of the North Carolina Department of Agriculture and Consumer Services to investigate the illegal slaughtering, processing and selling of misbranded, non-inspected and adulterated meat and poultry products to the general public.
- Q. During the announcement of the execution of the administrative inspection warrant, the son of the property owners, Mr. Felicito Phillip Hernandez, 624 Trailing Rock Dr., Charlotte, NC, stated that he was in charge of the non-inspected slaughtering and processing operation.
- R. Upon entering the property, CO's Renshaw, Groce and Moody observed, photographed and videoed the wooden buildings on the property and the live animals which consisted of: approximately fifteen (15) goats/lambs, eleven (11) cattle, ten (10) hogs, nine (9) rabbits, forty (40) pigeons/doves, two (2) turkeys, one (1) small calf, thirty (30) ducks, twenty (20) roosters and two hundred and twenty (220) chickens.
- S. On the property, there was an open-sided roof structure that contained a slaughter area. This slaughter area contained a stainless-steel table, a white metal bathtub with a propane tank and burner system attached to it. The bath tub was full of hot steaming water and in the past Big H Farms has used this tub as a scald vat for pigs.
- T. There was a holding pen directly attached to the slaughter area that contained ten (10) pigs/hogs which appeared to be waiting to be slaughtered.

- U. Attached to the slaughter area was a wooden building (20 ft x 20 ft., tan in color) which was being used for processing the slaughtered animals and storing the non-inspected meat and poultry products which were being offered for sale and sold to the general public. Inside the processing room there was one small meat grinder, two band saws, several fans (with heavy dust/debris), dozens of knives and steels, two stainless steel processing tables, a wheelbarrow, a water hose, a poultry plucker, a poultry scolding vat, household cleaning chemicals, a 22 rifle, one commercial cooler with three glass doors and one household refrigerator/freezer which all contained non-inspected, misbranded and/or adulterated meat (goat, sheep, pork and beef) products which were being stored and offered for sale to the public.
- V. When entering the wooden building where the processing operation was set up Big H Farms used the left side of the room for cleaning and processing poultry. This area contained a stainless-steel table, a poultry plucker, a stainless-steel sink, a poultry scolding vat, three (3) large plastic containers and the plastic containers were full of cleaned whole chickens (approximately three hundred ten (310) pounds). The poultry scolding vat was full of water and still steaming from previous use.
- W. On January 20, 2018, Mr. Phillip Hernandez was asked to produce documentation on the poultry that was slaughtered and processed earlier that day as noted in M.P.I.D. Notice 5-14. Mr. Hernandez stated that he did not maintain or have any records for the poultry that was slaughtered and processed earlier that day.
- X. Directly in front of the slaughter area and across a small gravel lot there is a cabin style structure (approximately 25ftX60ft) that contained three (3) large chest freezers. Inside the three (3) chest freezers were approximately one thousand (1,000) pounds of non-inspected, misbranded and adulterated beef meat and approximately one hundred (100) pounds of non-inspected, misbranded and adulterated pork meat. Inside the three (3) chest freezers the non-inspected, misbranded and adulterated meat products were encased in ice, had a freezer burned appearance and the meat products were stored in the freezers without any wrapping or protection to maintain the wholesomeness of the meat products.
- Y. On the back side of the cabin style structure there was a walk-in refrigerated truck body used as a walk-in cooler. The truck body had a heavy-duty gate (used on animal pastures) mounted to the ceiling and the non-inspected, misbranded and/or adulterated meat products were hanging on metal hooks from this heavy-duty gate. CO's Renshaw, Groce and Moody observed approximately ninety (90) pounds of goat meat, two hundred and sixty (260) pounds of pork meat and one thousand fifty (1,050) pounds of beef meat. The non-inspected, misbranded and/or adulterated meat products contained a speckled black substance, hair and fecal material.
- Z. CO's Renshaw, Groce and Moody estimated that approximately 3,120 pounds of non-inspected, misbranded (no NCDA or USDA mark of inspection or required labeling) and/or adulterated meat products were observed and NC Detained (Tag Numbers: 2930, 2932, 2937, 4390, 4391, 4402, 4403, 4404, 4405, 4415 and 4416), videoed and photographed.

- AA. CO's Renshaw, Groce and Moody examined the NC Detained non-inspected, misbranded and/or adulterated meat products and observed various meat products of goat/lamb, beef and pork that contained fecal material, hair, rust and a black substance directly on the meat products.
- BB. Inside the processing room was a meat band saw, a one compartment stainless steel sink with a water hose attached, plastic containers, several scales, one scalding water tank for processing chickens, a wood cutting block, a wood table, several knives and a metal cone used for slaughtering chickens.
- CC. Numerous unsanitary conditions and practices were observed by CO's Renshaw, Groce and Moody which led to the direct adulteration of the slaughtered and processed animals. These unsanitary conditions and practices included but were not limited to:
- a. the band saw contained meat particles from previous day(s) use;
 - b. blood, bones, hooves and horns were observed lying around the area from previous day(s) slaughter/processing activities;
 - c. the equipment, tables and buildings showed no signs of routine cleaning or sanitizing;
 - d. the processing table located next to the kill floor had a white cutting board on the top which was discolored and deeply scored with knife marks;
 - e. the stainless-steel processing table located next to the kill floor had a buildup of dried blood residues and hair, from the previous day(s) slaughter, on the surface area;
 - f. no device to sanitize knives was observed in the building;
 - g. the scald vat was a converted bathtub and had a buildup (black unidentified substance and hair) on the surface area from previous day(s) use;
 - h. a bag containing Kevlar gloves had heavy buildups (dirt, grime and meat particles) on the surface area from previous day(s) use and;
 - i. knives used for processing had buildup (dried blood residue and hair) on the surface area from the previous day(s) use.
- DD. On the south side grounds of the property, CO's Renshaw, Groce and Moody observed several acres of land where it appeared Mr. Hernandez had been digging to dispose of dead animals and offal (internal organs, heads and bones) generated by the non-inspected slaughter and processing facility.
- EE. On January 20, 2018, Mr. Phillip Hernandez was issued on-site cease and desist letters for the selling of non-inspected, misbranded and/or adulterated meat and poultry products.
- FF. On October 14, 2011, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez was found to be slaughtering (without the benefit of NCDA or USDA inspection) processing, storing, offering for sale and selling non-inspected, misbranded and adulterated meat products to the general public in violation of the North Carolina Compulsory Meat Inspection Law, General Statutes 106-549.17 and 106-549.23 and the North Carolina Poultry Products Inspection Laws, General Statutes § 106-549.56.

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicitio Phillip Hernandez
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GG. On June 21, 2012, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicitio Phillip Hernandez was issued a civil penalty of \$68,000.00 by the North Carolina Department of Agriculture and Consumer Services (NCDA&CS), Meat and Poultry Inspection Division (MPID) for the slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling of non-inspected, misbranded and/or adulterated meat products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17, § 106-549.23 and § 106-406 and the North Carolina Poultry Products Inspection Laws, General Statute § 106-549.53 and § 106-549.56.

CONCLUSIONS OF LAW

- A. Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicitio Hernandez are found to be slaughtering (without the benefit of NCDA (State) or USDA (Federal) inspection), processing, storing, offering for sale and selling non-inspected/misbranded and/or adulterated meat and poultry products to the general public and in addition, the unacceptable insanitary conditions at the location/facility were such that all products slaughtered (without the benefit of NCDA (State) or USDA (Federal) inspection), processed, stored, offered for sale and sold would be rendered adulterated in violation of General Statutes § 106-549.17, § 106-549.23 and § 106-549.56 and may be assessed a civil penalty of up to five thousand (\$5,000.00) dollars per violation under G.S. § 106-549.35(c) and under G.S. § 106-549.59 (a1).
- B. The Commissioner of Agriculture, pursuant to G.S. § 106-549.35(c) and G.S. § 106-549.59 (a1) has the authority to assess civil penalties in this matter. The authority has been delegated to Dr. Beth Yongue, Director, Meat and Poultry Inspection Division by the Commissioner of Agriculture pursuant to G.S. § 143B-10(a).

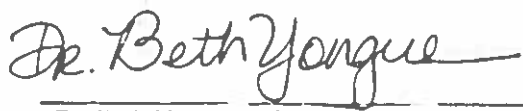
I. DECISION

As required by G.S. § 106-549.35(c) and G.S. § 106-549.59 (a1) and in determining the amount of the civil penalty, I have considered the degree and extent of harm caused by the violation of G.S. § 106-549.17, 106-549.23, 106-549.53 and 106-549.56.

Accordingly, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicitio Phillip Hernandez are assessed a civil penalty of:

(\$22,000.00) § 106-549.17.(a) - Inspection of Animals Before Slaughter
(\$22,000.00) § 106-549.23.(1) - Prohibited Slaughter
(\$22,000.00) § 106-549.23.(3)(a) - Prohibited Sale (Misbranded)
(\$22,000.00) § 106-549.23.(3)(b) - Articles Required to be Inspected
(\$22,000.00) § 106-549.23.(3)(a) - Prohibited Sale (Adulterated)
(\$2,000.00) § 106-549.56.(a)(2) - Prohibited Act (Misbranded)

\$112,000.00 for violating General Statute § 106-549.17, § 106-549.23, § 106-549.53 and § 106-549.56.
\$112,000.00 TOTAL AMOUNT ASSESSED.

February 19, 2018 
Date Dr. Beth Yongue, Director
Meat and Poultry Inspection Division



Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Meat and Poultry Inspection Division

Dr. Beth Yongue
State Director

April 3, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
1945 Dilling Farm Road
Charlotte, NC 28214

Mr. Felicito Phillip Hernandez
624 Trailing Rock Road
Charlotte, NC 28214

**RE: CIVIL PENALTY ASSESSMENT FOR VIOLATIONS
OF THE MEAT INSPECTION LAWS AND POULTRY PRODUCTS INSPECTION LAWS
GENERAL STATUTES § 106-549.17 and 106-549.23.**

Dear Mr. Pedro Hernandez, Ms. Zenaida Hernandez, Mr. Felicito Phillip Hernandez

Pursuant to North Carolina General Statutes (G.S.) 106-549.35(c) and (G.S.) 106-549.59(a1) this letter is notice of a civil penalty by the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division (NCDA&CS). The civil penalty assessment document is attached.

Within 60 days from the date of receipt, you must do one of the following:

1. Pay the civil penalty assessment; or
2. File a written petition for a contested case hearing in the Office of Administrative Hearings appealing the penalty assessment.

Pursuant to General Statutes §150B-22, informal settlement negotiations may be initiated at any time. To negotiate a settlement of this assessment, present your offer to Dr. Beth Yongue, Director, Meat & Poultry Inspection Division, who may be contacted by telephone at (919) 707-3180. Settlement offers do not extend the 60-day deadline for payment or filing of a contested case petition.

Additional information about your options is provided below:

1001 Mail Service Center, Raleigh, North Carolina 27689-1001 • (919) 733-4136
Toll Free Hearing Impaired: 1-800-735-2962 • Toll Free Speech Impaired: 1-877-735-8200
www.ncagr.com/meatpoultry
Equal Opportunity in Employment and Services

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Ms. Zenaida Hernandez
Mr. Felicito Phillip Hernandez
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-PAYMENT-

To pay the penalty, please send your payment by check or money order made payable to the North Carolina Department of Agriculture and Consumer Services to:

North Carolina Department of Agriculture and Consumer Services
Dr. Beth Yongue, Director
Meat & Poultry Inspection Division
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

-APPEAL-

If you file a contested case petition, it must be in writing and in the form prescribed by G.S. § 150B-23. File the petition and one copy with:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, North Carolina 27699-1001

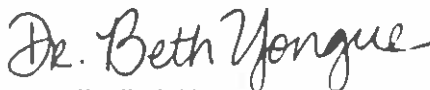
Any questions about filing a petition may be directed to the Clerk of OAH by telephone (919) 733-0926. You must serve NCDA&CS by mailing a copy of the petition to:

Ms. Tina Hlabse
North Carolina Department of Agriculture and Consumer Services
Process Agent and General Counsel
1001 Mail Service Center
Raleigh, North Carolina 27699-1001

Payment of the penalty will not foreclose further enforcement action against you for any new violation. If the violations which resulted in the assessment are of a continuing nature, NCDA&CS reserves the right to assess additional civil penalties in the future or take other enforcement action against you.

Your attention to this matter is appreciated.

Sincerely,



Dr. Beth Yongue
Director, Meat & Poultry Inspection Division

MEY:dm

Attachments: Assessment Document
CC: Mr. Chris McLennan, Assistant Attorney General
Mr. Joe Reardon, Assistant Commissioner
Ms. Tina Hlabse, General Counsel

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Ms. Zenaida Hernandez
Mr. Felicito Phillip Hernandez
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STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE & CONSUMER SERVICES
MEAT & POULTRY INSPECTION DIVISION

IN THE MATTER OF)

Mr. Pedro Hernandez)
Ms. Zenaida Hernandez)
Mr. Felicito Hernandez)

FOR VIOLATIONS OF THE N.C. COMPULSORY)
MEAT INSPECTION LAW AND N.C. POULTRY)
POULTRY PRODUCTS LAW)
G.S. § 106-549.17, § 106-549.23(1), § 106-549.23(3)(a))
§ 106-549.23(3)(a) & § 106-549.23(3)(b))

NOTICE OF VIOLATIONS
AND ASSESSMENT OF
CIVIL PENALTY

Acting pursuant to North Carolina General Statute (G.S.) § 106-549.35(c), § 106-549.17, § 106-549.23(1), § 106-549.23(3)(a), § 106-549.23(3)(a) & § 106-549.23(3)(b). Dr. Beth Yongue, Director, Meat and Poultry Inspection Division of North Carolina Department of Agriculture and Consumer Services (NCDA&CS) makes the following:

I. FINDINGS OF FACTS:

- A. This investigation is a result of anonymous information received on February 12, 2018, at the North Carolina Department of Agriculture & Consumer Services, Meat and Poultry Inspection Division, Raleigh Office alleging that there was a non-inspected slaughter and processing operation being conducted at Big H Farms, 1945 Dilling Farm Road, Charlotte, North Carolina.
- B. On February 17, 2018, a confidential informant, while posing as a member of the general public, went to 1945 Dilling Farm Road, Charlotte, North Carolina also known as Big H Farms, where an apparent non-inspected slaughter and processing operation appeared to be in full operation, without the benefit of NCDA (State) or USDA (Federal) inspection.
- C. After arriving at the property, the confidential informant, spoke with a farm employee and requested to purchase some beef meat. The farm employee told the confidential informant to go to another section of the farm (the restaurant style building area) where he observed a small amount of non-inspected, misbranded and/or adulterated beef meat being stored, offered for sale and sold to the general public. Also, while the confidential informant was waiting, he observed a partially visible beef carcass that was hanging behind a plastic style partition (this animal was slaughtered prior to the confidential informant's arrival).

- D. A farm employee then packaged approximately five (5) pounds of the beef meat into a small non-food grade plastic bag. The non-food grade plastic bag stated the following: "Have A Nice Day", "Thank You Gracias".
- E. On February 17, 2018, the confidential informant, paid six (6) dollars per pound for the beef meat a total of \$30.00.
- F. The non-inspected, misbranded and/or adulterated meat products were transferred from the confidential informant to Compliance Officer Philip Renshaw (hereinafter, CO Renshaw, respectively) relevant to chain of custody proceedings.
- G. Upon taking custody of the non-inspected, misbranded and/or adulterated meat products, CO Renshaw examined and photographed the contents and saw no NCDA (State) or USDA (Federal) marks of inspection or required labeling on the meat products or packaging.
- H. CO Renshaw transferred the above mentioned non-inspected, misbranded and/or adulterated meat products to the MPID Raleigh Compliance Office, following the Division chain of custody proceedings.
- I. Big H Farms (1945 Dilling Farm Road, Charlotte, North Carolina) owned/operated by Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez, does not operate under County, State (NCDA) or Federal (USDA) inspection.
- J. On October 14, 2011, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez were found to be slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling non-inspected, misbranded and/or adulterated meat products and poultry products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17 and § 106-549.23 and the North Carolina Poultry Products Inspection Laws, General Statute § 106-549.56.
- K. On June 21, 2012, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez were issued a civil penalty of \$68,000.00, later settled for \$54,000.00, by the North Carolina Department of Agriculture & Consumer Services (NCDA&CS), Meat and Poultry Inspection Division (MPID) for the slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling of non-inspected, misbranded and/or adulterated meat products and poultry products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17, § 106-549.23 and § 106-406 and the North Carolina Poultry Products Inspection Laws, General Statutes § 106-549.53 and § 106-549.56.

- L. On January 20, 2018, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez were found to be slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling non-inspected, misbranded and/or adulterated meat products and misbranded poultry products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17 and § 106-549.23 and the North Carolina Poultry Products Inspection Laws, General Statute § 106-549.56.
- M. On February 19, 2018, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez were issued a civil penalty of \$112,000.00 by the North Carolina Department of Agriculture & Consumer Services (NCDA&CS), Meat and Poultry Inspection Division (MPID) for the slaughtering (without the benefit of NCDA or USDA inspection), processing, storing, offering for sale and selling of non-inspected, misbranded and/or adulterated meat products and misbranded poultry products to the general public in violation of the North Carolina Compulsory Meat Inspection Laws, General Statutes § 106-549.17, and § 106-549.23 and the North Carolina Poultry Products Inspection Laws, General Statute § 106-549.56.

II. CONCLUSIONS OF LAW

- A. Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Hernandez are found to be slaughtering (without the benefit of NCDA (State) or USDA (Federal) inspection), processing, storing, offering for sale and selling non-inspected, misbranded and/or adulterated meat products to the general public and in addition, the unacceptable insanitary conditions at the location/facility were such that all products slaughtered (without the benefit of NCDA (State) or USDA (Federal) inspection), processed, stored, offered for sale and sold would be rendered adulterated in violation of General Statutes § 106-549.17 and § 106-549.23 and may be assessed a civil penalty of up to five thousand (\$5,000.00) dollars per violation under General Statute § 106-549.35(c) and under General Statute § 106-549.59 (a1).
- B. The Commissioner of Agriculture, pursuant to General Statute § 106-549.35(c) and General Statute § 106-549.59 (a1) has the authority to assess civil penalties in this matter. The authority has been delegated to Dr. Beth Yongue, Director, Meat and Poultry Inspection Division by the Commissioner of Agriculture pursuant to General Statute § 143B-10(a).

Mr. Pedro Hernandez
Ms. Zenaida Hernandez
Mr. Felicito Phillip Hernandez
Page 6

III. DECISION

As required by General Statute §106-549.35(c) and General Statute §106-549.59 (a1) and in determining the amount of the civil penalty, I have considered the degree and extent of harm caused by the violation of General Statutes § 106-549.17 and §106-549.23.

Accordingly, Mr. Pedro Hernandez, Ms. Zenaida Hernandez and Mr. Felicito Phillip Hernandez are assessed a civil penalty of:

(\$5,000.00) §106-549.17.(a) - Inspection of Animals Before Slaughter
(\$5,000.00) §106-549.23.(1) - Prohibited Slaughter
(\$5,000.00) §106-549.23.(3)(a) - Prohibited Sale (Misbranded)
(\$5,000.00) §106-549.23.(3)(b) - Articles Required to be Inspected
(\$5,000.00) §106-549.23.(3)(a) - Prohibited Sale (Adulterated)

\$25,000.00 for violating General Statutes §106-549.17, §106-549.23(1), §106-549.23(3)(a), §106-549.23(3)(b) & §106-549.23(3)(a).

\$25,000.00 TOTAL AMOUNT ASSESSED.

Date

April 3, 2018

Dr. Beth Yongue

Dr. Beth Yongue, Director
Meat and Poultry Inspection Division

APPENDIX D

STATE OF NORTH CAROLINA
COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
__ CVS __

**NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND
CONSUMER SERVICES, MEAT AND
POULTRY INSPECTION DIVISION,**

Plaintiff,

v.

FELICITO HERNANDEZ,

Defendant.

**STATEMENT AUTHORIZING
CONFESSION OF JUDGMENT**

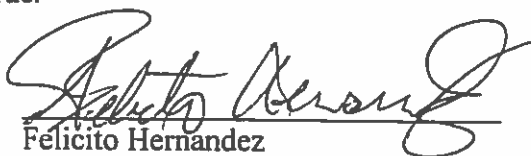
Felicitito Hernandez, acting pursuant to Rule 68.1 of the North Carolina Rules of Civil Procedure, and having been duly sworn, hereby deposes and says:

1. Felicitito Hernandez is the Defendant in this matter and is a resident of Mecklenburg County, North Carolina.
2. Plaintiff is the North Carolina Department of Agriculture and Consumer Services, Meat and Poultry Inspection Division, which is an agency of the State of North Carolina organized pursuant to Chapter 106 of North Carolina General Statutes and headquartered in Wake County, North Carolina. By statute, Plaintiff is tasked by law with enforcing North Carolina Meat Inspection Law and Poultry Products Laws (Articles 49B, C and D of Chapter 106 of the General Statutes).
3. Defendant hereby confesses judgment in favor of Plaintiff and authorizes this Court to enter judgment against Defendant and in favor of Plaintiff in the amount of Sixty One Thousand Dollars (\$61,000.00), less any payments made, plus costs and interest at the State's legal rate from the date of entry of this judgment until paid in full.
4. This confession of judgment is for an amount justly owed and Defendant is liable to Plaintiff in this amount pursuant to a Settlement Agreement lawfully entered into by the parties. In said Settlement Agreement, which is attached hereto and incorporated herein by reference, the parties agreed to resolve a dispute regarding an alleged violation of North Carolina Meat Inspection and Poultry Products Laws. As part of the consideration exchanged in the Settlement Agreement, Defendant agreed to pay Plaintiff and execute this confession of judgment in favor of Plaintiff in the amount of Sixty One Thousand Dollars (\$61,000.00).

VERIFICATION

Felicitto Hernandez, being first duly sworn, deposes and says:

He has read the foregoing Confession of Judgment and the statements contained therein are true of his own knowledge, except for those matters and things stated therein upon information and belief, and as to those things, he believes them to be true.



Felicitto Hernandez
624 Trailing Rock Road
Charlotte, North Carolina 28214

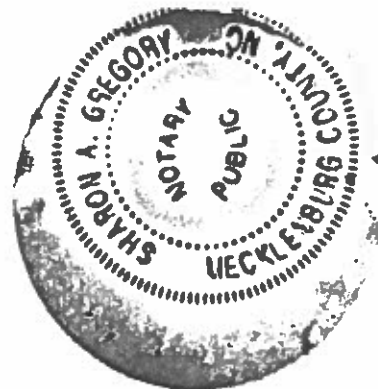
Subscribed and sworn to before me this day by Felicitto Hernandez.

This the 24 day of July, 2018.


Signature of Notary Public

Sharon A. Gregory
Printed Name of Notary Public

My commission expires: 10/22/22



STATE OF NORTH CAROLINA

COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION

__ CVS __

**NORTH CAROLINA DEPARTMENT
OF AGRICULTURE AND
CONSUMER SERVICES,
STRUCTURAL PEST CONTROL
AND PESTICIDES DIVISION,**

Plaintiff,

v.

FELICITO HERNANDEZ,

Defendant.

JUDGMENT

Upon the foregoing confession of judgment, IT IS THEREFORE ORDERED that judgment is entered for Plaintiff against Defendant in the sum of _____, with credit for previous payments made by Defendant as reflected below, with interest, to run at the State's legal rate on the unpaid balance from - _____, 201__, together with costs in the sum of \$ _____. Defendant is given credit for payment of the sum of \$ _____, which Plaintiff hereby acknowledges receipt of prior to filing of this Confession of Judgment.

This the ____ day of _____, 201__.

Clerk of Superior Court



Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Meat and Poultry Inspection Division

Dr. Beth Yongue
State Director

MPID Notice 6-14 (Revision 2)

September 17, 2014

REQUIREMENTS FOR THE PRODUCER/GROWER 20,000 POULTRY EXEMPTION

I. **PURPOSE:** This notice provides instructions for individuals slaughtering and/or processing up to 20,000 poultry of their own raising as a Producer/Grower under exemption from mandatory (daily) inspection requirements of the Poultry Products Inspection Act and the NC Poultry Products Inspection Law. All poultry products produced under these exemptions can only be sold within the state of North Carolina.

II. **CANCELLATION:** MPID Notice 15-12, dated 9-17-12

III. **REASON FOR REISSUANCE:** To provide specialty claims labeling requirements in relationship to exempt poultry products.

IV. **DEFINITIONS:**

Poultry: "Poultry" means any of the following domesticated birds: chickens, turkeys, ducks, geese, guineas, ratites, and squabs.

Processing: Allowable "processing activities" under this exemption are limited to minimal processing of the raw dressed poultry which includes the following: cutting and trimming of whole dressed raw birds into halves, quarters, or other individual pieces or parts, grinding, stuffing and/or adding seasonings to the raw exempt poultry and wrapping, bagging, packaging and labeling of the exempt poultry products.

V. **REFERENCES:** 9 CFR 381.10; NC General Statute 106-549.62

VI. **PROCEDURE:**

Producer/Grower 20,000 Poultry Limit Exemption

A person may slaughter and process (on his or her premises) poultry that he/she raised and he/she may distribute such poultry without mandatory (daily) inspection. The limited provisions of this exemption apply to poultry growers who slaughter/process no more than 20,000 birds in a calendar year for use as human food. To operate under this exemption the noted nine (9) requirements must be met.

1. The producer/grower slaughters/processes no more than 20,000 healthy birds of his/her own raising, on his/her premises in a calendar year.

2. The producer/grower sells/distributes only poultry products he/she prepares under the Producer/Grower 20,000 Poultry Limit Exemption. He/she may not buy or sell poultry products prepared under another exemption in the same calendar year.

3. The poultry products can be sold only within the state of North Carolina. The poultry products may not move in interstate commerce.

4. The poultry are healthy when slaughtered.

5. The slaughter and processing at the Producer/Grower's premises is conducted under sanitary standards, practices, and procedures that produce products that are sound, clean, fit for human food and not adulterated. Sanitation requirements are outlined in Attachment 1: Basic Sanitary Standards
6. The Producer/Grower only distributes poultry products he/she produced under the Poultry/Grower Exemption. General Note: The producer/grower can also distribute poultry products that he/she raised and had slaughtered/processed under USDA inspection.
7. With the exception of mobile slaughter units, the facility used to slaughter or process the poultry is not used to slaughter or process another person's poultry unless the State Director of Meat and Poultry Inspection grants an exemption.
8. All poultry or poultry products produced under this exemption must be labeled with the following:
 - a. the processor's name,
 - b. the address,
 - c. the statement, Exempt P.L. 90-492,
 - d. Safe Handling Instructions

See Attachment 2 for an example of a "Safe Handling Instructions" label.

Specialty claims such as "local," "free range," "raised without antibiotics," and other descriptive terms are not permitted on the labels of exempt poultry products or associated point of purchase materials (posters, brochures, etc). If poultry producers desire to make any claims about their poultry products, such poultry must be slaughtered and processed at a USDA inspected poultry slaughter establishment. Claims must be pre-approved per MPID Notice 10-09 Labeling and Point of Purchase Claims.

9. The Producer/Grower keeps accurate and legible records necessary for the effective enforcement of the Act. Records include slaughter records and records covering the sales of poultry products to customers. These records are subject to review by USDA Food Safety and Inspection Service or NCDA&CS Meat and Poultry Inspection Division employees, to determine compliance with the requirement for sales not to exceed 20,000 poultry in a calendar year.

Additional 20,000 Poultry Limit Exemptions

Two additional possible exemptions fall in this category. They are Producer, Grower or Other Person and Small Enterprise. Exemption criteria requirements differ for each exemption and are complex. Sales and processing activities are limited under these two exemptions. A slaughter or processor of poultry may not simultaneously operate under more than one exemption during a calendar year. For more information on these two additional specific exemptions, contact the NCDA&CS Meat and Poultry Inspection Division.

ADDITIONAL INFORMATION: If you have any questions or need additional information, contact the NCDA&CS Meat and Poultry Inspection Division at (919) 707-3180.

Attachment 1: Basic Sanitary Standards

Attachment 2: "Safe Handling Instructions" Label Example

Dr. Beth Yongue
State Director

DISTRIBUTION:
Poultry Exempt Operators,
MPID Field Personnel

SUBJECT CATEGORY:
Compliance

Attachment 1: Basic Sanitary Standards

Following are general basic sanitary standards, practices, and procedures [9 CFR 416.2-416.5]. The list is a summary of the regulatory requirements for sanitation procedures and practices that are required for a poultry business receiving full U.S. Department of Agriculture inspection and are applicable to poultry exempt operations {Title 9 CFR Part 416}.

A. Sanitary operating conditions. All food-contact surfaces and non-food-contact surfaces of an exempt facility are cleaned and sanitized as frequently as necessary to prevent the creation of insanitary conditions and the adulteration of product. Cleaning compounds, sanitizing agents, processing aids, and other chemicals used by an exempt facility are safe and effective under the conditions of use. Such chemicals are used, handled, and stored in a manner that will not adulterate product or create insanitary conditions. Documentation substantiating the safety of a chemical's use in a food processing environment is available to inspection program employees for review. Product is protected from adulteration during processing, handling, storage, loading, and unloading and during transportation from official establishments.

B. Grounds and pest control. The grounds of exempt operation are maintained to prevent conditions that could lead to insanitary conditions or adulteration of product. Plant operators have in place a pest management program to prevent the harborage and breeding of pests on the grounds and within the facilities. The operator's pest control operation is capable of preventing product adulteration. Management makes every effort to prevent entry of rodents, insects, or animals into areas where products are handled, processed, or stored. Openings (doors and windows) leading to the outside or to areas holding inedible product have effective closures and completely fill the openings. Areas inside and outside the facility are maintained to prevent harborage of rodents and insects. The pest control substances used are safe and effective under the conditions of use and are not applied or stored in a manner that will result in the adulteration of product or the creation of insanitary conditions.

C. Sewage and waste disposal. Sewage and waste disposal systems properly remove sewage and waste materials—feces, feathers, trash, garbage, and paper—from the facility. Sewage is disposed of into a sewage system separate from all other drainage lines or disposed of through other means sufficient to prevent backup of sewage into areas where product is processed, handled, or stored. When the sewage disposal system is a private system requiring approval by a State or local health authority, upon request, the management must furnish to the inspector a letter of approval from that authority.

D. Water supply and water, ice, and solution reuse. A supply of running water that complies with the National Primary Drinking Water regulations (40 CFR part 141) at a suitable temperature and under pressure as needed, is provided in all areas where required (for processing product; for cleaning rooms and equipment, utensils, and packaging materials; for employee sanitary facilities, etc.). If a facility uses a municipal water supply, it must make available to the inspector, upon request, a water report, issued under the authority of the State or local health agency, certifying or attesting to the potability of the water supply. If a facility uses a private well for its water supply, it must make available to the inspector, upon request, documentation certifying the potability of the water supply that has been renewed at least semi-annually.

E. Facilities. Maintenance of facilities during slaughtering and processing is accomplished in a manner to ensure the production of wholesome, unadulterated product.

F. Dressing rooms, lavatories, and toilets. Dressing rooms, toilet rooms, and urinals are sufficient in number ample in size, conveniently located, and maintained in a sanitary condition and in good repair at all times to ensure cleanliness of all persons handling any product. Dressing rooms, lavatories, and toilets are separate from the rooms and compartments in which products are processed, stored, or handled.

G. Inedible Material Control. The operator handles and maintains inedible material in a manner that prevents the diversion of inedible animal products into human food channels and prevents the adulteration of human food.

Attachment 2: Safe Handling Instructions Label Example

Safe Handling Instructions

Some food products may contain bacteria that could cause illness if the product is mishandled or cooked improperly. For your protection, follow these safe handling instructions.



Keep refrigerated or frozen. Thaw in refrigerator or microwave.



Keep raw meat and poultry separate from other foods. Wash working surfaces (including cutting boards), utensils, and hand after touching raw meat or poultry.



Cook thoroughly.



Keep hot foods hot. Refrigerate leftovers immediately or discard.

RELEASE FOR PROPERTY DAMAGE ONLYI/WE Ellen Frank

For myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$20.00, I/We do hereby remise, release, and forever

discharge The State of North Carolina, NC Dept of Agriculture & Consumer Services and NC State Fair Division

and its, his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of DAMAGE TO PROPERTY (including loss of use thereof) arising out of an accident which occurred on or about the 22nd day of October, 2014, at or near Raleigh in the State of North Carolina. This release does not consider any verified hidden damages and or supplemental damages.

The above sum stated as a consideration of this Release is to be paid as follows:

\$20.00 To: Ellen Frank

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/we have signed this Release at

30th Ellen FrankIn the State of North Carolina this 15th day of December, 2014.

IN THE PRESENCE OF

Ellen Frank SignatureEllen Frank Print Name1429 Opal Ct AddressRaleigh, NC 27615 City/ZipXSS# X Karen Rossler WitnessX 4108 Morning Blossom AddressX Raleigh NC 27616 City/Zip

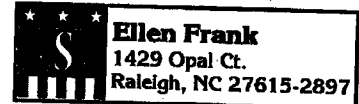
Thank you for your
concern and attention
to this unfortunate
situation/occurrence

AGREED TO:

Agency _____

By _____

14-02602



ROY COOPER
ATTORNEY GENERAL

State of North Carolina
Department of Justice
P. O. Box 629
RALEIGH
27602-0629

11/3/2014

STATEMENT OF CLAIMANT

This form is designed to assist you in making a claim against the State of North Carolina for damages or injuries which you believe to have been the result of negligence on the part of a State employee. Upon completion of this statement, please return it to the office from which it was received. Following an investigation by the Department of Justice, you will be contacted and notified as to whether the State will voluntarily assume liability of your claim.

1. Your Name: ELLEN S. FRANK
2. Your Address: 1429 Opal Court
3. City: Raleigh, State: NC Zip: 27615
- 3a. Social Security Number: (Not necessary)
4. Telephone Business: (919) 389-3010 Home: (same)
- 4a. Date of Accident: Wed, Oct 22, '14 Time: 5pm Place: Bench @ NCSU Ice Cream STAND.

Under the laws of the State of North Carolina, before any liability can be placed upon the State, the person who has been damaged or injured must be able to name a specific State employee who was the direct cause of the accident. If a specific employee is not named, the claim cannot be paid under any circumstances. Under the provisions of the laws of North Carolina, it is not sufficient that you can name a supervisor or foreman when the accident was caused by some other employee. It is also necessary that you describe exactly how you feel the State employee was negligent.

5. State agency involved: NORTH CAROLINA STATE FAIR
6. State employee you consider negligent: (NOT Applicable)
- 6a. Address: N/A

7. Explain in your own words how you were injured or damaged and in what way you believe the State employee named above was negligent: It was a "small" mishap. In actuality, it could've been more severe. I was sitting on the Bench eating icecream someone sat next to me and asked me to "please shoot down", As I slid down the bench to make room for the other person to sit, a large nail was sticking up- not hammered down properly, this caused my new cord slacks to rip in the Back thigh area. It did NOT cut me, in any,

OR my leg in any way,
shape or form. It did not
hurt me, at ALL! Making
that clear. It just caused
a large gash or Rip in my
new cord slacks!

I then took off my shoe
and tried to bang or hammer it
down, but it did not work, ONE
would've needed A Hammer to
~~re~~ fix it!

All I request is the amount
on page 3, of this form, that
allows me to go out and replace
my damaged slacks!

Thanking you in advance
for your time and attention
to this situation / mishap.

If the claim you are presenting involves a motor vehicle accident, please complete the following section.

8. Your Vehicle:

Make: _____ Model: N/A Year: _____

License Number: _____ State: _____

Driver: _____ Age: _____

Owner of Vehicle: _____

Your Insurance Company and Policy No.: _____

Speed of vehicle at the time of the accident: _____

Has the vehicle been repaired: Yes _____ No _____

If the vehicle has been repaired, state: Place where it was repaired: _____

Cost of repair: _____ Have the repairs been paid for: Yes _____ No _____

If the repairs were paid for, who paid for them: _____

If repairs have not been made, enclose two estimates.

9. State vehicle:

Agency: _____ Operator: _____

Address: _____ Make of Vehicle: _____

Model: _____ Year: _____ License No.: _____

Speed of Vehicle: _____ If State vehicle was a truck, state: Was it loaded: _____

With what: _____

How high was it loaded: _____ Was it covered: _____

10. If the State vehicle involved was a school bus, please complete the following section:

County: _____ Driver: _____

Address: _____ Age: _____ Sex: _____

Experience: _____

Bus Number: _____ License No: _____ Make: _____

Number of Students on the bus: _____ Estimated Speed: _____

11. Amount of damages: \$19.99

These damages consist of the following: Kohl's Corderoy
SLACKS,
Navy Blue.

12. Injuries:

<u>NAME</u>	<u>ADDRESS</u>
<u>NIA</u>	

13. Nature of injuries:

14. Doctor(s):

Hospital(s):

Dates of Treatment:

15. ☒ If there were any witnesses to the accident, please list their names below and their addresses:

<u>NAME</u>	<u>ADDRESS</u>
<u>NIA</u>	

16. Investigating Officer:

Department:

17. SHOW HOW ACCIDENT OCCURRED BY USING ONE OF THESE DIAGRAMS -

IMPORTANT: Please fill in diagram showing position of automobile and injured person (or other vehicle with which insured's automobile collided) with direction in which both were proceeding.

YOUR CAR



OTHER CAR



TRAILER



BUS



MOTORCYCLE



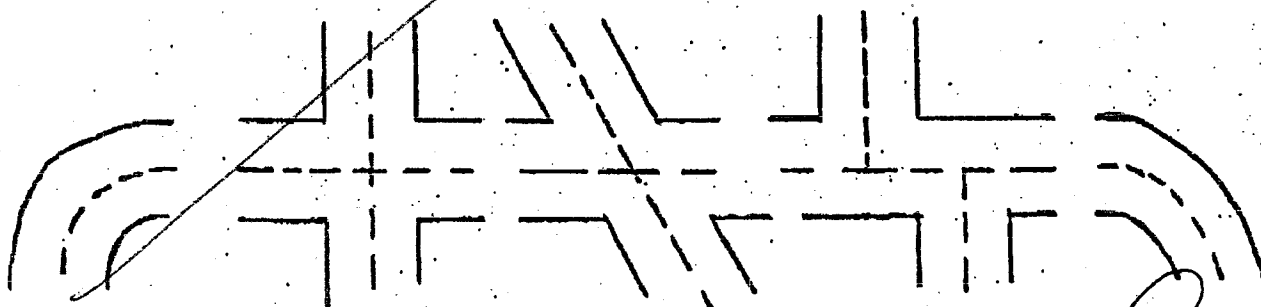
TRUCK



PEDESTRIAN



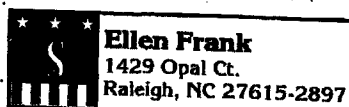
N/A



Date of report

November 3, 2014

Ellen S. Frank
Signature of Person making report



Ellen S. FRANK

1429 Opal Ct.

Raleigh, NC 27615

(919) 389-3010

16-02610

RELEASE FOR PROPERTY DAMAGE ONLY

I/We Phillip Story for myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$410.86. I/We do hereby remise, release, and forever discharge The State of North Carolina, the NC Department of Agriculture and NC Forestry, and their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of damage to property arising out of an accident which occurred on or about the 29th day of November, 2016 near Lexington, NC in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows :

\$ 410.86 To: Phillip Story

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/WE have signed this Release at Lexington in the State of N.C. this 20th day of December, 2016.

IN THE PRESENCE OF

x Melley Broadway Witness Name

x 10 LSB Plaza Witness Address

x Lexington, NC 27292 City/State/Zip

x Phillip Story Print Name

x Phillip Story Signature

x 2022 Butler St Address

x Lexington, N.C. 27292 City/State/Zip

 Social Security #

AGREED TO:

Agency: N.C. Department of Justice

By: Shelly W. Perry

STATE OF NORTH CAROLINA
COUNTY OF CABARRUS

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
13 CVS 1815

STATE OF NORTH CAROLINA, ex rel.,
NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES,

Plaintiff,

v.

TERRY CHRISTENBURY,

Defendant.

SETTLEMENT AGREEMENT

RECITALS

Terry Christenbury (the "Defendant") and the North Carolina Department of Agriculture and Consumer Services (the "Plaintiff") desire to fully and finally settle this and all other disputes and controversies surrounding the Defendant's operation of an unlicensed slaughter facility and failure to properly dispose of animal remains, and desire to affect a full and final settlement solely in order to avoid the burden and expense of continued litigation.

Whereas, on April 25, 2010, the Director of Plaintiff's Veterinary Division cited the Defendant for violations of G.S. § 106-403 and 02 NCAC 52C .0102;

Whereas, on December 28, 2011, the Director of Plaintiff's Meat & Poultry Inspection Division cited Defendant for violations of G.S. §§ 106-549.23 and 106-549.17;

Whereas each division director imposed the following civil penalties:

Veterinary Division: \$5,000.00;

Meat & Poultry Inspection Division: \$7,000.00;

Whereas Defendant received written notice of said civil penalties, each of which is attached hereto and hereby incorporated herein by reference as Appendices A and B;

Whereas, the sum of the civil penalty assessment was \$12,000.00;

Whereas Defendant failed to pay said civil penalties and failed to petition for a contested case hearing before the North Carolina Office of Administrative Hearings to contest the same;

Whereas, Plaintiff filed its civil complaint against Defendant for purposes of securing a judgment for said civil penalties on June 17, 2013;

Whereas, Defendant was duly served with a Summons and copy of said civil complaint, and filed a timely Answer thereto; and

WHEREAS the parties desire to resolve these matters without further litigation.

NOW THEREFORE, the parties agree as follows:

- 1) Whereas, within ten days (10) of the date both parties have signed this formal written settlement agreement, Defendant shall remove or cause to be removed all equipment and other items (hereinafter, "equipment") that can be used for the slaughter and/or processing of animals for human consumption, except for the following items:

a) _____;

b) _____;

T.C. None (initial)

from 911 Reed Mine Road, Midland, NC 28107, ("Defendant's residence") and all such items will be disposed of in a lawful fashion by sale or disposal in a landfill or other appropriate facility within forty-eight hours after removal. Removal of the equipment from Defendant's residence will take place in the presence of the Plaintiff's designated representative. If the equipment is sold, Defendant shall provide the Plaintiff with the name and address of the person or company purchasing it within twenty-four hours of delivering the equipment to the purchaser. The parties further understand and agree that Defendant may use the items of equipment mentioned above only for the slaughtering or processing of animals of his own raising, and the preparation by him of the carcasses, parts thereof, meat and meat food

products of such animals exclusively for use by him and members of his household and his nonpaying guests and employees, as provided in N.C. Gen. Stat. § 106-549.27(a)(1);

- 2) Defendant hereby agrees to pay the sum of twelve thousand two hundred and fifty dollars (\$12,250.00) to the Plaintiff as consideration for this settlement agreement. The parties agree and acknowledge that the Plaintiff is required by law to turn said payment over to the Department of Public Instruction. Defendant shall pay the

Plaintiff according to the following schedule:

- a. Defendant shall pay the Plaintiff the sum of four thousand dollars (\$4,000.00) on or before May 9, 2015;
 - b. Defendant shall pay the remaining balance of eight thousand two hundred fifty dollars (\$8,250.00) in forty monthly installments of two hundred dollars (\$200.00) and a final payment of two hundred fifty dollars (\$250) due on the first day of each month, sent to **"NCDA&CS, Attention Janine Owens, 1001 Mail Service Center, Raleigh, NC 27699-1001,"** beginning on that date of the month following the month in which all of the parties to this Settlement Agreement have executed this Settlement Agreement. A monthly payment is late and the Defendant is in breach of this Settlement Agreement if payment is received after 5:00 p.m. of the date due. Receipt of payment in an envelope postmarked or otherwise dated by commercial courier or the U.S. Postal Service on or before the date due, which is received after the date due, shall be deemed to be on time;
- 3) As further consideration Defendant shall sign Appendix C, a Confession of Judgment in favor of the Plaintiff for the sum of twelve thousand two hundred dollars

(\$12,250.00). The Plaintiff shall not file said Confession of Judgment with the Court unless the Defendant violates this settlement agreement by:

- a. Failing to pay the \$12,250.00 within the time and according to the terms provided in this Settlement Agreement;
- b. Failing to remove the equipment from 911 Reed Mine Road, Midland, NC 28107, by the deadline stated herein, unless Plaintiff finds that there is a good reason to grant the Defendant additional time in which to do so;
- c. Returning the equipment or other items to 911 Reed Mine Road, Midland, NC 28107, that, in the opinion of the Plaintiff's compliance officers, enables the Defendant to conduct unlicensed, uninspected slaughter there again; or
- d. Committing another violation of the laws and/or rules enforced by the Veterinary Division or the Meat and Poultry Inspection Division, specifically but not limited to Articles 49B and 49C of the North Carolina Mandatory Meat and Poultry Inspection Law, there regulations enacted thereunder, or G.S. § 106-403 and the regulations enacted thereunder.

4) Plaintiff may deem Defendant to be in breach of this Settlement Agreement upon finding:

- e. Defendant has failed to make timely payment; if Defendant finds he lacks sufficient funds to make a monthly payment, he shall notify the Plaintiff before payment is due and request that the payment be rolled over to the next month.
- f. The following month Defendant shall bring his payments up to date (paying double the usual monthly payment) unless he has received permission from the Plaintiff to pay less than double the monthly payment, \$400.00.

- g. Failure to make payment in full each month without prior notification to the Respondent shall constitute a material breach of this Settlement Agreement;
 - h. If the Plaintiff files the Confession of Judgment for such breach or any other breach of this Settlement Agreement, it shall not excuse Defendant from his continuing obligation to make monthly payments.
 - i. When it files the Confession of Judgment, the judgment shall reflect and give credit for payments made up to date of filing of the Confession of Judgment against the amount of \$12,250.00.
 - j. There is no interest charged on the unpaid balance and no penalty for early payment.
- 5) Plaintiff hereby reserves the right to forego filing Appendix C, the Confession of Judgment, against the Defendant if it finds a good reason to refrain from doing so. However, if Plaintiff in the sound exercise of its discretion refrains from filing Appendix C, this is not a waiver of its right to do so later;
- 6) Plaintiff has, contemporaneously with its execution of this Settlement Agreement, signed a Dismissal with Prejudice of the above-captioned case in the North Carolina Superior Court for Cabarrus County;
- 7) Defendant agrees not to offer any land that he owns, rents, or controls, together or separately, as a place to slaughter and/or process animals for food, except as provided by law for animals of his own raising, to be fed to his family, employees or non-paying guests;
- 8) Defendant does hereby promise and grant to the Plaintiff the right to enter the property located at 911 Reed Mine Road, Midland, NC 28107, and all other

properties that he currently owns, either jointly with others or individually, leases or has use of. Defendant shall, when he executes of this Settlement Agreement, provide to the Plaintiff a list of all the properties he currently owns, leases or has use of, both jointly with others or individually, including the properties' street address or GPS coordinates. Defendant shall provide to the Plaintiff a list of all said properties, Appendix D, which is attached hereto and incorporated herein by reference.

Plaintiff's right to enter and to inspect those properties and their buildings shall be without notice, at any time (24hours per day/7 days per week). Defendant further promises and agrees that, upon purchasing, leasing or otherwise receiving the use and/or control of any other parcels of land in the State of North Carolina after his execution of this agreement, he shall:

- k. notify the Plaintiff within forty-eight hours of receiving access to or control of said parcels of land;
 - l. grant Plaintiff the same right of entry and inspection thereto; and
 - m. provide the Plaintiff with the newly acquired land parcel's address or GPS coordinates.
- 9) Plaintiff hereby agrees that the right to conduct such inspections described in paragraph 9 shall not include the right to enter and inspect any building on any of the properties mentioned herein that are used solely as human habitation; and
- 10) Defendant further agrees not to commit any other violations of the North Carolina Meat and Poultry Inspection Law, articles 49B, 49C and 49H, or of G.S. § 106-403 or the regulations enacted thereunder.

In return, the Plaintiff hereby agrees as follows:

- 1) Plaintiff accepts twelve thousand two hundred and fifty dollars (\$12,250.00) in compromise of its civil penalty assessment in order to settle this matter;

- 2) Plaintiff agrees not to file Defendant's Confession of Judgment, Appendix C, unless Defendant violates this Settlement Agreement;
- 3) Plaintiff hereby agrees that, if Defendant complies with the Settlement Agreement completely and commits no violations of the North Carolina Meat and Poultry Inspection Law, its regulations or of G.S. § 106-403 and 02 NCAC 52C .0102 for from the date the Settlement Agreement is signed by both parties, until Defendant has paid the entire sum of \$12,250.00 to Plaintiff as provided above, the Plaintiff will return the original Confession of Judgment to the Defendant for cancellation unless Appendix C has been filed with the Clerk of Court of the county in which Defendant resides.

The parties mutually agree to act in good faith in the implementation of this agreement. The parties agree to bear their own attorney's fees. It is understood between the parties that this Agreement contains the entire agreement between the parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

The terms of this Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.

The effective date of this Agreement will be the date on which it has been executed by all parties as shown on the signature lines below.

North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates indicated below:

DEFENDANT

Terry Christenbury
TERRY CHRISTENBURY

Date: 5-8-2015

ATTORNEY FOR DEFENDANT

H. Jay White, Sr.
H. Jay White, Sr.

Date: 5/8/2015

ATTORNEY FOR PLAINTIFF

Barry H. Bloch
Barry H. Bloch
Assistant Attorney General
N.C. Department of Justice

Date: 5/14/2015

FOR PLAINTIFF

Alan Wade
ALAN WADE
Director, Meat and Poultry Inspection Division
North Carolina Department of Agriculture & Consumers Services

Date: 5-14-15

Carol Woodlief
CAROL WOODLIEF, DVM
Director, Animal Health Programs, Veterinary Division
North Carolina Department of Agriculture & Consumers Services

Date: 5-18-15

16-02698

RELEASE FOR PROPERTY DAMAGE ONLY

I/We Eric Torrence for myself/ourselves, my/our heirs, executors, administrators, successors, and assigns in consideration of the payment of \$555.00. I/We do hereby remise, release, and forever discharge The State of North Carolina, the NC Department of Agriculture and NC State Fairgrounds, and his/her, their heirs, executors, administrators, officers, employees, successors and assigns and all other persons, firms, and corporations, from and against all claims, demands, actions and causes of action for damages whensoever and howsoever arising on account of damage to property arising out of an accident which occurred on or about the 14th day of October, 2016 near NC State Fairgrounds, Raleigh in the State of North Carolina.

The above sum stated as a consideration of this Release is to be paid as follows :

\$ 555.00 To: Eric Torrence

IT IS UNDERSTOOD AND AGREED that neither the Release nor any payment made pursuant hereto is to be taken as an admission of liability on the part of any person or legal entity in whose favor the Release is given.

IN WITNESS WHEREOF I/WE have signed this Release at Jacksonville in the State of NORTH CAROLINA this 31 day of JANUARY, 2017.

IN THE PRESENCE OF

Michelle Pate Witness Name

326 King Rd. Witness Address

Jacksonville, NC City/State/Zip -
28540

ERIC L. TORRENCE Print Name

[Signature] Signature

5752 NC Hwy 41 West Address

TRENTON, NC 28585 City/State/Zip

[Redacted] Social Security #

AGREED TO:

Agency: N.C. Department of Justice

By:

Shelly W. Perry

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NORTH CAROLINA
WESTERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

v.

NORTH GEORGIA ELECTRIC
MEMBERSHIP CORPORATION et al.,

Defendants.

Civil Action No. 5:16-cv-820

REMEDIAL DESIGN/REMEDIAL ACTION (RD/RA) CONSENT DECREE

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I. BACKGROUND

A. The United States of America (“United States” or “Plaintiff”), on behalf of the Administrator of the United States Environmental Protection Agency (“EPA”), filed a complaint in this matter pursuant to Sections 106 and 107 of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. §§ 9606 and 9607.

B. The United States in its complaint seeks, *inter alia*: (1) reimbursement of costs incurred by EPA and the Department of Justice (“DOJ”) for response actions at the Ward Transformer Superfund Site in Raleigh, North Carolina (“Site”), together with accrued interest; (2) performance of response actions by the defendants at the Site consistent with the National Contingency Plan, 40 C.F.R. Part 300 (“NCP”); and (3) assessment of civil penalties against defendant Carr & Duff, Inc., for its alleged failure to comply with an EPA unilateral administrative order to perform remedial work at the Site.

C. In accordance with the NCP and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), EPA notified the State of North Carolina (the “State”) on December 23, 2008, of negotiations with potentially responsible parties (“PRPs”) regarding the implementation of the remedial design and remedial action (“RD/RA”) for the Site, and EPA has provided the State with an opportunity to participate in such negotiations and be a party to this Consent Decree (“CD”).

D. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the Department of Interior and the National Oceanic Atmospheric Administration on December 23, 2008, of negotiations with PRPs regarding the release of hazardous substances that may have resulted in injury to the natural resources under federal trusteeship and has encouraged the trustees to participate in the negotiation of this CD.

E. The defendants that have entered into this CD (“Settling Defendants” or “SDs”) do not admit any liability to Plaintiff arising out of the transactions or occurrences alleged in the complaint, nor do they acknowledge that the release or threatened release of hazardous substances at or from the Site constitutes an imminent and substantial endangerment to the public health or welfare or the environment. Settling Federal Agencies (“SFAs”) do not admit any liability arising out of the transactions or occurrences alleged in any counterclaim asserted by SDs.

F. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List (“NPL”), set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on April 30, 2003, 68 Fed. Reg. 23,077.

G. In response to a release or a substantial threat of a release of a hazardous substances at or from the Site, in April 2003, EPA commenced a Remedial Investigation and Feasibility Study (“RI/FS”) for the Site pursuant to 40 C.F.R. § 300.430.

H. EPA completed a Revised Remedial Investigation and Risk Assessment Report in September 2004, and a Remedial Investigation Report for Operable Unit 1 (“OU1”), Groundwater and Downstream Reaches, in July 2007, and EPA completed a Feasibility Study Report for Operable Unit 1, Downstream Reaches, Final, in July 2007.

I. On September 16, 2005, EPA Region 4 signed an Administrative Settlement Agreement and Order on Consent (“Removal AOC”) with Consolidation Coal Company, individually and as successor to Bishop Coal Company and Itmann Coal Company (“Consol”), Duke Energy Progress, LLC (“Duke”), Bassett Furniture Industries, Inc. (“Bassett”), Ward Transformer Company, Inc., and Ward Transformer Sales and Service, Inc. to perform a time-critical removal action at the Ward Transformer facility and adjacent parcels (now known as Operable Unit 2 (“OU2”)). Consol, Duke, Bassett, and PCS Phosphate Company, Inc. (“PCS”) performed the removal action required by the Removal AOC.

J. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the Feasibility Study and of the Proposed Plan for remedial action on August 6, 2007, and August 8, 2007, in two major local newspapers of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Regional Administrator, EPA Region 4, based the selection of the response action.

K. The decision by EPA on the remedial action to be implemented at OU1 of the Site is embodied in a Record of Decision for OU1 (“OU1 ROD”), executed on September 29, 2008, on which the State has given its concurrence. The ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA, 42 U.S.C. § 9617(b).

L. On September 29, 2011, pursuant to Section 106(a) of CERCLA, EPA Region 4 issued a unilateral administrative order to 23 parties, ordering them to develop the remedial design and perform the remedial action for the remedy set forth in the OU1 ROD.

M. On January 9, 2014, EPA Region 4 signed an Administrative Settlement Agreement and Order on Consent (“OU2 RI/FS AOC”) with Consol, Duke, and PCS to perform, and with certain federal agencies, including the United States Department of the Army, United States Department of the Navy, United States Department of the Air Force, and Tennessee Valley Authority, to partially fund, a supplemental remedial investigation/focused feasibility study (“RI/FS”) on OU2. Consol, Duke, and PCS are performing the RI/FS for OU2. EPA anticipates publishing a Record of Decision for OU2 (“OU2 ROD”) after the completion of the Remedial Investigation and Feasibility Study. EPA will perform the remedy for OU2 set forth in the OU2 ROD.

N. Based on the information presently available to EPA, EPA believes that the Work will be properly and promptly conducted by the Performing Settling Defendants (“PSDs”) if conducted in accordance with this CD and its appendices and funded by the Sales-Only Cashout Settling Defendants, Cashout Settling Defendants, Settling Repair Defendants, and SFAs.

O. Solely for the purposes of Section 113(j) of CERCLA, 42 U.S.C. § 9613(j), the remedy set forth in the OU1 ROD and the Work to be performed by PSDs shall constitute a response action taken or ordered by the President for which judicial review shall be limited to the administrative record.

P. The Parties recognize, and the Court by entering this CD finds, that this CD has been negotiated by the Parties in good faith and the settlement memorialized in this CD will

expedite the cleanup of the Site and will avoid prolonged and complicated litigation between the Parties, and that this CD is fair, reasonable, and in the public interest.

NOW, THEREFORE, it is hereby Ordered, Adjudged, and Decreed:

II. JURISDICTION

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1345, and 42 U.S.C. §§ 9606, 9607, and 9613(b). This Court also has personal jurisdiction over SDs. Solely for the purposes of this CD and the underlying complaint, SDs waive all objections and defenses that they may have to jurisdiction of the Court or to venue in this District. SDs shall not challenge the terms of this CD or this Court's jurisdiction to enter and enforce this CD.

III. PARTIES BOUND

2. This CD is binding upon the United States and upon SDs and their successors and assigns. Any change in ownership or corporate or other legal status of an SD including, but not limited to, any transfer of assets or real or personal property, shall in no way alter such SD's responsibilities under this CD.

3. PSDs shall provide a copy of this CD to each contractor hired to perform the Work and to each person representing any PSD with respect to the Site or the Work, and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this CD. PSDs or their contractors shall provide written notice of the CD to all subcontractors hired to perform any portion of the Work. PSDs shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Work in accordance with the terms of this CD. With regard to the activities undertaken pursuant to this CD, each contractor and subcontractor shall be deemed to be in a contractual relationship with PSDs within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

IV. DEFINITIONS

4. Unless otherwise expressly provided in this CD, terms used in this CD that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this CD or its appendices, the following definitions shall apply solely for purposes of this CD:

“Affected Property” shall mean all real property at the Site and any other real property where EPA determines, at any time, that access, land, water, or other resource use restrictions, and/or Institutional Controls are needed to implement the Remedial Action.

“Bassett” shall mean Non-Funding Performing Settling Defendant Bassett Furniture Industries, Inc.

“Cashout Settling Defendants” shall mean those Settling Defendants identified in Appendix B.

“Cashout Settling Federal Agencies” shall mean the United States Department of the Army (“Army”), United States Department of the Navy (“Navy”), and United States Department of the Air Force (“Air Force”) and their successor departments, agencies, or instrumentalities.

“CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675.

“Consol” shall mean Non-Funding Performing Settling Defendant Consolidation Coal Company, individually and as successor to Bishop Coal Company and Itmann Coal Company.

“Consent Decree” or “CD” shall mean this consent decree and all appendices attached hereto (listed in Section XXIII). In the event of conflict between this CD and any appendix, this CD shall control.

“Day” or “day” shall mean a calendar day. In computing any period of time under this CD, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.

“DOJ” shall mean the United States Department of Justice and its successor departments, agencies, or instrumentalities.

“Duke” shall mean Cashout Settling Defendant Duke Energy Progress, LLC.

“Effective Date” shall mean the date upon which the approval of this CD is entered on the Court’s docket.

“EPA” shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

“EPA Hazardous Substance Superfund” shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

“Escrow Agent” shall mean Thomas Claassen, Schneider Downs & Co., Inc., One PPG Place Suite 1700, Pittsburgh, PA 15222.

“Financial Trustee” shall mean Schneider Downs & Co., Inc., One PPG Place Suite 1700, Pittsburgh, PA 15222.

“Future Response Costs” shall mean all costs, including both direct and indirect costs, that the United States incurs pursuant to ¶ 11 (Emergencies and Releases), ¶ 29 (Access to Financial Assurance), Section VIII (Property Requirements) (including the cost of attorney time and any monies paid to secure or enforce access or land, water, or other resource use restrictions and/or to secure, implement, monitor, maintain, or enforce Institutional Controls including the amount of just compensation), and Section XIV (Dispute Resolution), and all litigation costs. Future Response Costs shall also mean all costs, including both direct and indirect costs, that the United States incurs in enforcing this CD.

“Institutional Controls” or “ICs” shall mean Proprietary Controls and state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices that: (a) limit land, water, or other resource use to minimize the potential for human exposure to Waste Material at or in connection with the Site; (b) limit land, water, or other resource use to

implement, ensure non-interference with, or ensure the protectiveness of the RA; and/or (c) provide information intended to modify or guide human behavior at or in connection with the Site.

“Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at http://www.epa.gov/ocfopage/finstatement/superfund/int_rate.htm.

“Interest Earned” shall mean interest earned on amounts in the Ward Transformer Disbursement Special Account, which shall be computed monthly at a rate based on the annual return on investments of the EPA Hazardous Substance Superfund. The applicable rate of interest shall be the rate in effect at the time the interest accrues.

“National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

“Non-Funding Performing Settling Defendants” shall mean Settling Defendants Consol, PCS, and Bassett.

“Non-Settling Owner” shall mean any person, other than an SD, that owns or controls any Affected Property. The clause “Non-Settling Owner’s Affected Property” means Affected Property owned or controlled by Non-Settling Owner.

“Operation and Maintenance” or “O&M” shall mean all activities required to operate, maintain, and monitor the effectiveness of the RA as specified in the SOW or any EPA-approved O&M Plan.

“OU1 ROD” shall mean the EPA Record of Decision relating to Operable Unit 1 at the Site signed on September 29, 2008, by the Regional Administrator, EPA Region 4, or his/her delegate, and all attachments thereto. The OU1 ROD is attached as Appendix F.

“OU2 RI/FS AOC” shall mean the Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation and Focused Feasibility Study entered on January 9, 2014, between EPA Region 4 and Consol, Duke, PCS, SFAs, and five other federal agencies.

“OU2 RI/FS AOC Parties” shall mean Consol, Duke, PCS, and SFAs.

“Paragraph” or “¶” shall mean a portion of this CD identified by an Arabic numeral or an upper or lower case letter.

“Parties” shall mean the United States and SDs.

“PCS” shall mean Non-Funding Performing Settling Defendant PCS Phosphate Company, Inc.

“Performance Standards” shall mean the cleanup levels and other measures of achievement of the remedial action objectives, as set forth in the OU1 ROD.

“Performing Settling Defendants” or “PSDs” shall mean the Settling Repair Defendants and Non-Funding Performing Settling Defendants.

“Plaintiff” shall mean the United States.

“Proprietary Controls” shall mean easements or covenants running with the land that (a) limit land, water, or other resource use and/or provide access rights and (b) are created pursuant to common law or statutory law by an instrument that is recorded in the appropriate land records office.

“RCRA” shall mean the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992 (also known as the Resource Conservation and Recovery Act).

“Remedial Action” or “RA” shall mean the remedial action selected in the OU1 ROD.

“Remedial Design” or “RD” shall mean those activities to be undertaken by PSDs to develop final plans and specifications for the RA as stated in the SOW.

“Sales-Only Cashout Settling Defendants” shall mean those Settling Defendants identified in Appendix A.

“Sales-Only Cashout Settling Federal Agency” shall mean the Tennessee Valley Authority and its successor departments, agencies, or instrumentalities.

“Section” shall mean a portion of this CD identified by a Roman numeral.

“Settling Defendants” or “SDs” shall mean the Sales-Only Cashout Settling Defendants, Cashout Settling Defendants, and PSDs.

“Settling Federal Agencies” or “SFAs” shall mean the Cashout Settling Federal Agencies, which consist of the Army, Navy, and Air Force, and the Sales-Only Cashout Settling Federal Agency, the Tennessee Valley Authority.

“Settling Repair Defendants” shall mean those Settling Defendants identified in Appendix C.

“Site” shall mean the Ward Transformer Superfund Site located in Raleigh, Wake County, North Carolina. The Site includes the Ward Transformer facility, certain parcels adjacent to the facility, nearby drainage pathways, and areas downgradient from the Ward Transformer facility as described in the OU1 ROD, and encompasses the areal extent of the contamination therefrom in the surface and subsurface sediments, soils, and waters. The Site is generally depicted on the map attached as Appendix E.

“State” shall mean the State of North Carolina.

“Statement of Work” or “SOW” shall mean the document describing the activities PSDs must perform to implement the RD, the RA, and O&M regarding the Site, which is attached as Appendix G.

“Supervising Contractor” shall mean the principal contractor retained by PSDs to supervise and direct the implementation of the Work under this CD.

“Transfer” shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

“Trust” shall mean the Ward Superfund OU1 Trust Fund to be established by the PSDs to receive settlement and other payments regarding the Site from the Settling Repair Defendants, the Cashout Settling Defendants, the Sales-Only Cashout Settling Defendants, the SFAs, and the Ward Transformer Disbursement Special Account, or such successor trust account as may be established by the PSDs.

“UAO” shall mean the Unilateral Administrative Order for OU1 issued by EPA on September 29, 2011.

“UAO Parties” shall mean those Settling Defendants identified in Appendix D.

“United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA and the SFAs.

“Ward Transformer Disbursement Special Account” shall mean the special account, within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3), and ¶ 36 (Creation of Ward Transformer Disbursement Special Account and Agreement to Disburse Funds to PSDs).

“Ward Transformer Special Account” shall mean the special account, within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3).

“Waste Material” shall mean (1) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any “hazardous material” under Section 130A-310(2) of the North Carolina General Statutes.

“Work” shall mean all activities and obligations SDs are required to perform under this CD, except the activities required under Section XX (Retention of Records). For purposes of clarity, Work includes, but is not limited to, all activities, including payment and funding obligations, required by the CD, including payment of Future Response Costs, financial assurance, stipulated penalties, and performance of further response actions pursuant to ¶ 18.

V. GENERAL PROVISIONS

5. **Objectives of the Parties.** The objectives of the Parties in entering into this CD are to protect public health or welfare or the environment by the financing of response actions at the Site by the Sales-Only Cashout Settling Defendants, Cashout Settling Defendants, Settling Repair Defendants, and SFAs, and the design and implementation of response actions at the Site by the PSDs; and to resolve the claims of Plaintiff against the SDs and the claims of the SDs that have been or could have been asserted against the United States with regard to this Site as provided in this CD.

6. Commitments by SDs and SFAs.

a. The Settling Repair Defendants, Cashout Settling Defendants, Sales-Only Cashout Settling Defendants, and SFAs shall finance the Work pursuant to this CD, and the PSDs shall perform the Work in accordance with this CD and all deliverables developed by PSDs and approved or modified by EPA pursuant to this CD. The PSDs shall also have access to funds from the Ward Transformer Disbursement Special Account as set forth in Section XI of this CD.

b. The Settling Repair Defendants shall make the initial payments to the Trust as provided in ¶ 32.a(1) of this CD. The Settling Repair Defendants shall pay any future assessments required to complete the Work pursuant to ¶ 32.b of this CD and the allocation schedule in Appendix C. In the event that any Settling Repair Defendant becomes insolvent, is in bankruptcy, or is otherwise unable or unwilling to pay all or some portion of its share of any future assessment, the remaining Settling Repair Defendants shall pay any such unpaid amount proportionally based on their allocations for future contributions set forth in Appendix C.

c. Upon making the payments to the Trust required under ¶ 32.a(1) of this CD and as set forth in Appendix A, each Sales-Only Cashout Settling Defendant shall have no further obligations under this CD, subject to the reservations set forth in ¶ 77.a. The payment obligations of Sales-Only Cashout Settling Defendants are several.

d. Upon making the payments to the Trust required under ¶ 32.a(1) of this CD and as set forth in Appendix B, which payment obligations are several, each Cashout Settling Defendant shall have no further obligations under this CD, subject to the reopeners set forth in ¶¶ 74 and 75 and the reservations set forth in ¶ 77.a.

e. Upon making the payments to the Trust required under ¶ 32.a(3) of this CD, the Sales-Only Cashout Settling Federal Agency shall have no further obligations under this CD, subject to the reservations set forth in ¶ 77.a.

f. Upon making the payments to the Trust required under ¶ 32.a(4) of this CD, each Cashout Settling Federal Agency shall have no further obligations under this CD, subject to the reopeners set forth in ¶¶ 74 and 75 and the reservations set forth in ¶ 77.a.

g. The PSDs will use the funds paid by the Sales-Only Cashout Settling Defendants, the Cashout Settling Defendants, the Settling Repair Defendants, and the SFAs, and the funds committed to the Work by EPA under Section XI of this CD, to finance the performance of the Work.

h. The obligations of the PSDs to finance and perform the Work and to pay Future Response Costs due under this CD are joint and several. In the event of the insolvency of any PSD or the failure by any PSD to implement any requirement of this CD, the remaining PSDs shall complete all such requirements.

i. Notwithstanding any other provision of this CD, in the event of any action by the United States to enforce this CD, no enforcement action shall be taken, and no stipulated penalties assessed, against any Non-Funding Performing Settling Defendant unless and until the United States has exhausted the pursuit of its remedies against all other PSDs.

7. **Compliance with Applicable Law.** Nothing in this CD limits PSDs' obligations to comply with the requirements of all applicable federal and state laws and regulations. PSDs must also comply with all applicable or relevant and appropriate requirements of all federal and state environmental laws as set forth in the OU1 ROD and the SOW. The activities conducted pursuant to this CD, if approved by EPA, shall be deemed to be consistent with the NCP as provided in Section 300.700(c)(3)(ii) of the NCP.

8. **Permits.**

a. As provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and Section 300.400(e) of the NCP, no permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work). Where any portion of the Work that is not on-site requires a federal or state permit or approval, PSDs shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals.

b. PSDs may seek relief under the provisions of Section XIII (Force Majeure) for any delay in the performance of the Work resulting from a failure to obtain, or a delay in obtaining, any permit or approval referenced in ¶ 8.a and required for the Work, provided that they have submitted timely and complete applications and taken all other actions necessary to obtain all such permits or approvals.

c. This CD is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

VI. PERFORMANCE OF THE WORK

9. **Coordination and Supervision.**

a. **Project Coordinators.**

(1) PSDs' Project Coordinator must have sufficient technical expertise to coordinate the Work. PSDs' Project Coordinator may not be an attorney representing any PSD in this matter and may not act as the Supervising Contractor. PSDs' Project Coordinator may assign other representatives, including other contractors, to assist in coordinating the Work.

(2) EPA shall designate and notify the PSDs of EPA's Project Coordinator and Alternate Project Coordinator. EPA may designate other representatives, which may include its employees, contractors and/or consultants, to oversee the Work. EPA's Project Coordinator/Alternate Project Coordinator will have the same authority as a remedial project manager and/or an on-scene coordinator, as described in the NCP. This includes the authority to halt the Work and/or to conduct or direct any necessary response action when he or she determines that conditions at the Site constitute an emergency or may present an immediate threat to public health or welfare or the environment due to a release or threatened release of Waste Material.

(3) PSDs' Project Coordinator shall meet with EPA's Project Coordinator at least monthly, in person or by phone.

b. **Supervising Contractor.** PSDs' proposed Supervising Contractor must have sufficient technical expertise to supervise the Work and a quality assurance system that complies with ANSI/ASQC E4-2004, Quality Systems for Environmental Data and Technology Programs: Requirements with Guidance for Use (American National Standard).

c. **Procedures for Disapproval/Notice to Proceed.**

(1) PSDs shall designate, and notify EPA, within 10 days after the Effective Date, of the name(s), contact information, and qualifications of the PSDs' proposed Project Coordinator and Supervising Contractor.

(2) EPA, after a reasonable opportunity for review and comment by the State, shall issue notices of disapproval and/or authorizations to proceed regarding the proposed Project Coordinator and Supervising Contractor, as applicable. Any notice of disapproval shall include an explanation of the basis for such disapproval. If EPA issues a notice of disapproval, PSDs shall, within 30 days, submit to EPA a list of supplemental proposed Project Coordinators and/or Supervising Contractors, as applicable, including a description of the qualifications of each. EPA shall issue a notice of disapproval or authorization to proceed regarding each supplemental proposed coordinator and/or contractor. PSDs may select any coordinator/contractor covered by an authorization to proceed and shall, within 21 days, notify EPA of PSDs' selection.

(3) PSDs may change their Project Coordinator and/or Supervising Contractor, as applicable, by following the procedures of ¶¶ 9.c(1) and 9.c(2).

10. **Performance of Work in Accordance with SOW.** PSDs shall: (a) develop the RD; (b) perform the RA; and (c) operate, maintain, and monitor the effectiveness of the RA; all in accordance with the SOW and all EPA-approved, conditionally-approved, or modified deliverables as required by the SOW. All deliverables required to be submitted for approval under the CD or SOW shall be subject to approval by EPA in accordance with Section V (Planning and Deliverables) of the SOW.

11. **Emergencies and Releases.** PSDs shall comply with the emergency and release response and reporting requirements under Section V, Task II, ¶ A.6 (Emergency Response and Reporting) of the SOW. Subject to Section XVI (Covenants by Plaintiff), nothing in this CD, including Section V, Task II, ¶ A.6 of the SOW, limits any authority of Plaintiff: (a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, or (b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site. If, due to PSDs' failure to take appropriate response action under Section V, Task II, ¶ A.6 of the SOW, EPA takes such action instead, PSDs shall reimburse EPA under Section X (Payments for Response Costs and Civil Penalties) for all costs of the response action.

12. **Community Involvement.** If requested by EPA, PSDs shall conduct community involvement activities under EPA's oversight as provided for in, and in accordance with, Section IV (Community Involvement) of the SOW. Such activities may include, but are not

limited to, designation of a Community Involvement Coordinator and implementation of a technical assistance plan.

13. Modification of SOW or Related Deliverables.

a. If EPA determines that it is necessary to modify the work specified in the SOW and/or in deliverables developed under the SOW in order to achieve and/or maintain the Performance Standards or to carry out and maintain the effectiveness of the RA, and such modification is consistent with the Selected Remedy set forth in Section III of the SOW, then EPA may notify PSDs of such modification. If PSDs object to the modification they may, within 30 days after EPA's notification, seek dispute resolution under Section XIV.

b. The SOW and/or related work plans shall be modified: (1) in accordance with the modification issued by EPA; or (2) if PSDs invoke dispute resolution, in accordance with the final resolution of the dispute. The modification shall be incorporated into and enforceable under this CD, and PSDs shall implement all work required by such modification. PSDs shall incorporate the modification into the deliverable required under the SOW, as appropriate.

c. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions as otherwise provided in this CD.

14. Nothing in this CD, the SOW, or any deliverable required under the SOW constitutes a warranty or representation of any kind by Plaintiff that compliance with the work requirements set forth in the SOW or related deliverable will achieve the Performance Standards.

VII. REMEDY REVIEW

15. **Periodic Review.** PSDs shall conduct, in accordance with Section III, ¶ A (Selected Remedy; Components) of the SOW, studies and investigations to support EPA's reviews under Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and applicable regulations, of whether the RA is protective of human health and the environment.

16. **EPA Selection of Further Response Actions.** If EPA determines, at any time, that the RA is not protective of human health and the environment, EPA may select further response actions for the Site in accordance with the requirements of CERCLA and the NCP.

17. **Opportunity to Comment.** PSDs and Cashout Settling Defendants and, if required by Section 113(k)(2) or 117 of CERCLA, 42 U.S.C. § 9613(k)(2) or 9617, the public, will be provided with an opportunity to comment on any further response actions proposed by EPA as a result of the review conducted pursuant to Section 121(c) of CERCLA and to submit written comments for the record during the comment period.

18. **Obligation to Finance and Perform Further Response Actions.** If EPA selects further response actions relating to the Site, EPA may require Cashout Settling Defendants and Settling Repair Defendants to finance and PSDs to perform such further response actions (which, for purposes of the CD, shall be considered part of the Work), but only to the extent that the reopener conditions in ¶ 74 or 75 (United States' Pre- and Post-Certification Reservations) are satisfied. PSDs or Cashout Settling Defendants may invoke the procedures set forth in Section XIV (Dispute Resolution) to dispute (a) EPA's determination that the reopener conditions of

¶ 74 or 75 are satisfied, (b) EPA's determination that the RA is not protective of human health and the environment, or (c) EPA's selection of the further response actions. Disputes regarding EPA's determination that the RA is not protective or EPA's selection of further response actions shall be resolved pursuant to ¶ 54 (Record Review).

19. **Submission of Plans.** If PSDs are required to perform further response actions pursuant to ¶ 18, they shall submit a plan for such response action to EPA for approval in accordance with the procedures of Section VI (Performance of the Work by PSDs). PSDs shall implement the approved plan in accordance with this CD.

VIII. PROPERTY REQUIREMENTS

20. **Agreements Regarding Access and Non-Interference.** PSDs shall, with respect to any Non-Settling Owner's Affected Property, use best efforts to secure from such Non-Settling Owner an agreement, enforceable by PSDs and by Plaintiff, providing that such Non-Settling Owner: (i) provide Plaintiff and the other PSDs, and their representatives, contractors, and subcontractors with access at all reasonable times to such Affected Property to conduct any activity regarding the CD, including those listed in ¶ 20.a (Access Requirements); and (ii) refrain from using such Affected Property in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Material, or interfere with or adversely affect the implementation, integrity, or protectiveness of the Remedial Action.

a. **Access Requirements.** The following is a list of activities for which access is required regarding the Affected Property:

- (1) Conducting or monitoring the Work;
- (2) Verifying any data or information submitted to the United States;
- (3) Conducting investigations regarding contamination at or near the Site;
- (4) Obtaining samples;
- (5) Assessing the need for, planning, or implementing additional response actions at or near the Site;
- (6) Assessing implementation of quality assurance and quality control practices as defined in the approved construction quality assurance quality control plan as provided in the SOW;
- (7) Implementing the Work pursuant to the conditions set forth in ¶ 78 (Work Takeover);
- (8) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by PSDs or their agents, consistent with Section XIX (Access to Information);
- (9) Assessing PSDs' compliance with the CD;

(10) Determining whether the Affected Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the CD; and

(11) Implementing, monitoring, maintaining, reporting on, and enforcing any land, water, or other resource use restrictions and Institutional Controls.

21. **Best Efforts.** As used in this Section, “best efforts” means the efforts that a reasonable person in the position of PSDs would use so as to achieve the goal in a timely manner, including the cost of employing professional assistance and the payment of reasonable sums of money to secure access and/or use restriction agreements. If PSDs are unable to accomplish what is required through “best efforts” in a timely manner, they shall notify the EPA, and include a description of the steps taken to comply with the requirements. If the United States deems it appropriate, it may assist PSDs, or take independent action, in obtaining such access and/or use restrictions. All costs incurred by the United States in providing such assistance or taking such action, including the cost of attorney time and the amount of monetary consideration or just compensation paid, constitute Future Response Costs to be reimbursed under Section X (Payments for Response Costs and Civil Penalties).

22. If EPA determines in a decision document prepared in accordance with the NCP that Institutional Controls in the form of state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices are needed, PSDs shall cooperate with EPA’s efforts to secure and ensure compliance with such Institutional Controls.

23. In the event of any Transfer of the Affected Property, unless the United States otherwise consents in writing, PSDs shall continue to comply with their obligations under the CD, including their obligation to secure access and ensure compliance with any land, water, or other resource use restrictions regarding the Affected Property, and to implement, maintain, monitor, and report on Institutional Controls.

24. Notwithstanding any provision of the CD, Plaintiff retains all of its access authorities and rights, as well as all of its rights to require land, water, or other resource use restrictions and Institutional Controls, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statute or regulations.

IX. FINANCIAL ASSURANCE

25. In order to ensure completion of the Work, PSDs shall secure financial assurance, initially in the amount of \$5,500,000 (“Estimated Cost of the Work”) for the benefit of EPA. The financial assurance must be one or more of the mechanisms listed below, in a form substantially identical to the relevant sample documents available from the “Financial Assurance” category on the Cleanup Enforcement Model Language and Sample Documents Database at <http://cfpub.epa.gov/compliance/models/>, and satisfactory to EPA. PSDs may use multiple mechanisms if they are limited to surety bonds guaranteeing payment, letters of credit, trust funds, escrow accounts, and/or insurance policies.

a. A surety bond guaranteeing payment and/or performance of the Work that is issued by a surety company among those listed as acceptable sureties on federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury;

b. An irrevocable letter of credit, payable to or at the direction of EPA, that is issued by an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency;

c. A trust fund established for the benefit of EPA that is administered by a trustee that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency;

d. A policy of insurance that provides EPA with acceptable rights as a beneficiary thereof and that is issued by an insurance carrier that has the authority to issue insurance policies in the applicable jurisdiction(s) and whose insurance operations are regulated and examined by a federal or state agency;

e. A demonstration by one or more Settling Repair Defendants that each such Settling Repair Defendant meets the relevant financial test criteria of 40 C.F.R. § 264.143(f) and reporting requirements of this Section for the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee, accompanied by a standby funding commitment, which allows PSDs to pay funds to or at the direction of EPA, up to the amount financially assured through the use of this demonstration in the event of a Work Takeover; or

f. A guarantee to fund or perform the Work executed in favor of EPA by one of the following: (1) a direct or indirect parent company of a PSD; or (2) a company that has a “substantial business relationship” (as defined in 40 C.F.R. § 264.141(h)) with a PSD; provided, however, that any company providing such a guarantee must demonstrate to EPA’s satisfaction that it meets the relevant financial test criteria of 40 C.F.R. § 264.143(f) and reporting requirements of this Section for the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee.

g. An escrow account that provides EPA security and rights equivalent to those provided by a trust fund that meets the requirements of 40 C.F.R. § 264.151(a)(1) to finance the Work in accordance with this CD. The escrow account shall provide that the funds placed therein are specifically and irrevocably reserved for the Work. PSDs shall include in any progress reports submitted pursuant to this CD or the SOW a report on the status of payments out of the escrow account. At EPA’s request, PSDs shall make available to EPA any financial reports or other similar documents prepared by the Escrow Agent or other person responsible for approving payments out of the escrow account. Upon completion of the SOW any funds remaining in the escrow account may be disbursed to the Trust.

26. PSDs have selected, and EPA has found satisfactory, as an initial financial assurance an escrow account prepared in accordance with ¶ 25.g. Within 30 days after the Effective Date, or 30 days after EPA’s approval of the form and substance of PSDs’ financial assurance, whichever is later, PSDs shall secure all executed and/or otherwise finalized mechanisms or other documents consistent with the EPA-approved form of financial assurance

and shall submit such mechanisms and documents to the Program Analyst, to the United States, and to EPA as specified in Section XXI (Notices and Submissions).

27. If PSDs provide financial assurance by means of a demonstration or guarantee under ¶ 25.e or 25.f, the affected PSDs shall also comply and shall ensure that their guarantors comply with the other relevant criteria and requirements of 40 C.F.R. § 264.143(f) and this Section, including, but not limited to: (a) the initial submission to EPA of required documents from the affected entity's chief financial officer and independent certified public accountant no later than 30 days after the Effective Date; (b) the annual resubmission of such documents within 90 days after the close of each such entity's fiscal year; and (c) the notification of EPA no later than 30 days, in accordance with ¶ 28, after any such entity determines that it no longer satisfies the relevant financial test criteria and requirements set forth at 40 C.F.R. § 264.143(f)(1). PSDs agree that EPA may also, based on a belief that an affected entity may no longer meet the financial test requirements of ¶ 25.e or 25.f, require reports of financial condition at any time from such entity in addition to those specified in this Paragraph. For purposes of this Section, references in 40 C.F.R. Part 264, Subpart H, to: (1) the terms "current closure cost estimate," "current post-closure cost estimate," and "current plugging and abandonment cost estimate" include the Estimated Cost of the Work; (2) the phrase "the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates" includes the sum of all environmental obligations (including obligations under CERCLA, RCRA, and any other federal, state, or tribal environmental obligation) guaranteed by such company or for which such company is otherwise financially obligated in addition to the Estimated Cost of the Work under this CD; (3) the terms "owner" and "operator" include each PSD making a demonstration or obtaining a guarantee under ¶ 25.e or 25.f; and (4) the terms "facility" and "hazardous waste management facility" include the Site.

28. PSDs shall diligently monitor the adequacy of the financial assurance. If any PSD becomes aware of any information indicating that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, such PSD shall notify EPA of such information within 7 days. If EPA determines that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, EPA will notify the affected PSD of such determination. PSDs shall, within 30 days after notifying EPA or receiving notice from EPA under this Paragraph, secure and submit to EPA for approval a proposal for a revised or alternative financial assurance mechanism that satisfies the requirements of this Section. EPA may extend this deadline for such time as is reasonably necessary for the affected PSD, in the exercise of due diligence, to secure and submit to EPA a proposal for a revised or alternative financial assurance mechanism, not to exceed 60 days. PSDs shall follow the procedures of ¶ 30 (Modification of Amount, Form, or Terms of Financial Assurance) in seeking approval of, and submitting documentation for, the revised or alternative financial assurance mechanism. PSDs' inability to secure and submit to EPA financial assurance in accordance with this Section shall in no way excuse performance of any other requirements of this CD, including, without limitation, the obligation of PSDs to complete the Work in accordance with the terms of this CD.

29. Access to Financial Assurance.

a. If EPA issues a notice of implementation of a Work Takeover under ¶ 78.b, then, in accordance with any applicable financial assurance mechanism and/or related

standby funding commitment, EPA is entitled to: (1) the performance of the Work; and/or (2) require that any funds guaranteed be paid in accordance with ¶ 29.d.

b. If EPA is notified by the issuer of a financial assurance mechanism that it intends to cancel such mechanism, and the affected PSD fails to provide an alternative financial assurance mechanism in accordance with this Section at least 30 days prior to the cancellation date, the funds guaranteed under such mechanism must be paid prior to cancellation in accordance with ¶ 29.d.

c. If, upon issuance of a notice of implementation of a Work Takeover under ¶ 78.b, either: (1) EPA is unable for any reason to promptly secure the resources guaranteed under any applicable financial assurance mechanism and/or related standby funding commitment, whether in cash or in kind, to continue and complete the Work; or (2) the financial assurance is provided under ¶ 25.e or 25.f, then EPA may demand an amount, as determined by EPA, sufficient to cover the cost of the remaining Work to be performed. PSDs shall, within 5 days of such demand, pay the amount demanded as directed by EPA.

d. Any amounts required to be paid under this ¶ 29 shall be, as directed by EPA: (i) paid to EPA in order to facilitate the completion of the Work by EPA or by another person; or (ii) deposited into an interest-bearing account, established at a duly chartered bank or trust company that is insured by the FDIC, in order to facilitate the completion of the Work by another person. If payment is made to EPA, EPA may deposit the payment into the EPA Hazardous Substance Superfund or into the Ward Transformer Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

e. All EPA Work Takeover costs not paid under this ¶ 29 must be reimbursed as Future Response Costs under Section X (Payments for Response Costs and Civil Penalties).

30. **Modification of Amount, Form, or Terms of Financial Assurance.** PSDs may submit, on any anniversary of the Effective Date or at any other time agreed to by the Parties, a request to reduce the amount, or change the form or terms, of the financial assurance mechanism. Any such request must be submitted to EPA in accordance with ¶ 26, and must include an estimate of the cost of the remaining Work, an explanation of the bases for the cost calculation, and a description of the proposed changes, if any, to the form or terms of the financial assurance. EPA will notify PSDs of its decision to approve or disapprove a requested reduction or change pursuant to this Paragraph. PSDs may reduce the amount of the financial assurance mechanism only in accordance with: (a) EPA's approval; or (b) if there is a dispute, the agreement, final administrative decision, or final judicial decision resolving such dispute under Section XIV (Dispute Resolution). Any decision made by EPA on a request submitted under this Paragraph to change the form or terms of a financial assurance mechanism shall be made in EPA's sole and unreviewable discretion, and such decision shall not be subject to challenge by PSDs pursuant to the dispute resolution provisions of this CD or in any other forum. Within 30 days after receipt of EPA's approval of, or the agreement or decision resolving a dispute relating to, the requested modifications pursuant to this Paragraph, PSDs shall submit to EPA documentation of the reduced, revised, or alternative financial assurance mechanism in accordance with ¶ 26.

31. **Release, Cancellation, or Discontinuation of Financial Assurance.** PSDs may release, cancel, or discontinue any financial assurance provided under this Section only: (a) if EPA issues a Certification of Work Completion under Section V, Task II, ¶ D.1 (Remedial Action Report) of the SOW; (b) in accordance with EPA's approval of such release, cancellation, or discontinuation; or (c) if there is a dispute regarding the release, cancellation or discontinuance of any financial assurance, in accordance with the agreement, final administrative decision, or final judicial decision resolving such dispute under Section XIV (Dispute Resolution).

X. PAYMENTS FOR RESPONSE COSTS AND CIVIL PENALTIES

32. Payments Due to the Trust

a. Cashout Payments and Initial Payments.

(1) Each Sales-Only Cashout Settling Defendant has submitted to the Trust its payment as specified in Appendix A to this CD. Each Cashout Settling Defendant has submitted to the Trust its payment as specified in Appendix B to this CD. Each Settling Repair Defendant has submitted to the Trust its initial payment as specified in Appendix C to this CD.

(2) The Trust shall transmit funds in the Trust to the escrow account pursuant to ¶ 26.

(3) As soon as reasonably practicable after the Effective Date, the Sales-Only Cashout Settling Federal Agency shall pay \$10,000 to the Trust. If the payment is not made within 90 days after the Effective Date, the Sales-Only Cashout Settling Federal Agency shall pay Interest on the unpaid balance, with such Interest commencing on the 91st day after the Effective Date.

(4) As soon as reasonably practicable after the Effective Date, the United States, on behalf of the Cashout Settling Federal Agencies, shall pay \$1,089,000 to the Trust. If the payment is not made within 90 days after the Effective Date, the United States shall pay Interest on the unpaid balance, with such Interest commencing on the 91st day after the Effective Date. The Parties to this Consent Decree recognize and acknowledge that the payment obligation can only be paid from appropriated funds legally available for such purpose. Nothing in this Consent Decree shall be interpreted or construed as a commitment or requirement that any Cashout Settling Federal Agency obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable provision of the law.

b. Any Future Assessments. Within 60 days after the receipt of any future assessment from the Trust, each Settling Repair Defendant shall pay its assessment to the Trust in accordance with Appendix C. Payments shall be paid by mailing a check, payable to "Ward Superfund OU1 Trust Fund," to

Thomas G. Claassen CPA, ABV, CFE
Shareholder
Schneider Downs & Co., Inc.
One PPG Place, Suite 1700
Pittsburgh, PA 15222

Payments for any future assessments may also be made via wire transfer. The Financial Trustee will distribute wire transfer instructions to each Settling Repair Defendant within sixty (60) days of the Effective Date.

33. Payment by Carr & Duff, Inc. for Civil Penalties.

a. Within 30 days after the Effective Date, and subject to ¶ E of this CD, Settling Repair Defendant Carr & Duff, Inc. shall pay the United States a sum of \$40,000 in full and final settlement of the United States' claim for civil penalties under Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Payment shall be made in accordance with ¶ 35. The total amount to be paid by Carr & Duff, Inc. pursuant to this Paragraph shall be deposited in the EPA Hazardous Substance Superfund.

b. In the event that the payment required by ¶ 33.a is not made by the date required, Carr & Duff, Inc. shall pay Interest on the unpaid balance. Interest shall begin to accrue on the Effective Date and shall accrue through the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiff by virtue of Carr & Duff, Inc.'s failure to make timely payment under this Paragraph, including, but not limited to, payment of stipulated penalties pursuant to Section XV (Stipulated Penalties).

c. Carr & Duff, Inc. shall not deduct any civil penalties paid pursuant to this Paragraph in calculating its federal income tax.

34. Payments by PSDs for Future Response Costs. PSDs shall pay to EPA all Future Response Costs not inconsistent with the NCP.

a. **Periodic Bills for Future Response Costs.** On a periodic basis, if any Future Response Costs have been incurred, EPA will send PSDs a bill requiring payment that includes a SCORPIOS Report which includes direct and indirect costs incurred by EPA, its contractors, subcontractors, and DOJ. PSDs shall make all payments within 30 days after PSDs' receipt of each bill requiring payment, except as otherwise provided in ¶ 34.c, in accordance with ¶ 35.

b. **Deposit of Future Response Costs Payments.** The total amount to be paid by PSDs pursuant to ¶ 34.a (Periodic Bills for Future Response Costs) shall be deposited by EPA in the Ward Transformer Special Account to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund, provided, however, that EPA may deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund if, at the time the payment is received, EPA estimates that the Ward Transformer Special Account balance is sufficient to address currently anticipated future response actions to be conducted or financed by EPA at or in connection with the Site.

c. **Contesting Future Response Costs.** PSDs may submit a Notice of Dispute, initiating the procedures of Section XIV (Dispute Resolution), regarding any Future Response Costs billed under ¶ 34.a (Periodic Bills for Future Response Costs) if they determine that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if they believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. Such Notice

of Dispute shall be submitted in writing within 30 days after receipt of the bill and must be sent to the United States pursuant to Section XXI (Notices and Submissions). Such Notice of Dispute shall specifically identify the contested Future Response Costs and the basis for objection. If PSDs submit a Notice of Dispute, PSDs shall within the 30-day period, also as a requirement for initiating the dispute, (a) pay all uncontested Future Response Costs to the United States, and (b) establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation (“FDIC”), and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. PSDs shall send to the United States, as provided in Section XXI (Notices and Submissions), a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. If the United States prevails in the dispute, PSDs shall pay the sums due (with accrued interest) to the United States within 7 days after the resolution of the dispute. If PSDs prevail concerning any aspect of the contested costs, PSDs shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to the United States within 7 days after the resolution of the dispute. PSDs shall be disbursed any balance of the escrow account. All payments to the United States under this Paragraph shall be made in accordance with ¶ 35.a. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XIV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding PSDs’ obligation to reimburse the United States for its Future Response Costs.

d. **Interest.** In the event that any payment for Future Response Costs required under this Section is not made by the date required, PSDs shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill. The Interest shall accrue through the date of PSDs’ payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiff by virtue of PSDs’ failure to make timely payments under this Section including, but not limited to, payment of stipulated penalties pursuant to ¶ 58 (Stipulated Penalty Amounts – Work).

e. Future Response Costs, if not inconsistent with the NCP, may be submitted by PSDs to the Trust for payment.

35. Payment Instructions.

a. The Financial Litigation Unit (“FLU”) of the United States Attorney’s Office for the Eastern District of North Carolina shall provide PSDs and Carr & Duff, Inc., in accordance with ¶ 102, with instructions regarding making payments to DOJ on behalf of EPA. The instructions must include a Consolidated Debt Collection System (“CDCS”) number to identify payments made under this CD.

b. All payments subject to this ¶ 35 shall be made by Fedwire Electronic Funds Transfer (“EFT”) to the U.S. DOJ account, in accordance with the instructions provided under ¶ 35.a, and including references to the CDCS Number, Site/Spill ID Number A4S4, and DJ Number 90-11-2-07152/2. The Fedwire EFT payment must be sent as follows:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read
“D 68010727 Environmental Protection Agency”

c. For all payments required to be made in accordance with this ¶ 35, PSDs or Carr & Duff, Inc., as applicable, shall send notices that payment has been made to the United States, EPA, and the EPA Cincinnati Finance Center, all in accordance with ¶ 102. All notices must include references to the Site/Spill ID and DJ numbers.

XI. DISBURSEMENT OF SPECIAL ACCOUNT FUNDS

36. Creation of Ward Transformer Disbursement Special Account and Agreement to Disburse Funds to PSDs. Within 30 days after the Effective Date, EPA shall establish the Ward Transformer Disbursement Special Account and shall transfer \$405,000 from the Ward Transformer Special Account to the Ward Transformer Disbursement Special Account. Subject to the terms and conditions set forth in this Section, EPA agrees to make the funds in the Ward Transformer Disbursement Special Account, including Interest Earned on the funds in the Ward Transformer Disbursement Special Account, available for disbursement to PSDs as partial reimbursement for performance of the Work. EPA shall disburse funds by wire transfer from the Ward Transformer Disbursement Special Account to the Trust in accordance with the procedures and milestones for phased disbursement set forth in this Section.

37. Timing, Amount, and Method of Disbursing Funds From the Ward Transformer Disbursement Special Account. Within 30 days after EPA’s receipt of a Cost Summary and Certification, as defined by ¶ 38.b, or if EPA has requested additional information under ¶ 38.b or a revised Cost Summary and Certification under ¶ 38.c, within 15 days after receipt of the additional information or revised Cost Summary and Certification, and subject to the conditions set forth in this Section, EPA shall disburse the funds from the Ward Transformer Disbursement Special Account at the completion of the following milestones, and in the amounts set forth below:

Milestone	Disbursement of Funds
EPA approval of RA Work Plan	35% of funds in the Ward Transformer Disbursement Special Account
PSDs’ expenditure of \$3,700,000 on Work, excluding costs set forth in ¶ 39 (Costs Excluded from Disbursement)	Remainder of funds in the Ward Transformer Disbursement Special Account

EPA shall disburse the funds from the Ward Transformer Disbursement Special Account to PSDs by mailing a check, payable to “Ward Superfund OUI Trust Fund,” to:

Thomas G. Claassen CPA, ABV, CFE
Shareholder
Schneider Downs & Co., Inc.
One PPG Place, Suite 1700
Pittsburgh, PA 15222

Payments for any future assessments may also be made via wire transfer. The Financial Trustee will distribute wire transfer instructions to EPA within sixty (60) days of the Effective Date.

38. Requests for Disbursement of Special Account Funds.

a. Within 5 days after issuance of EPA’s written confirmation from the EPA Project Coordinator that a milestone of the Work, as defined in ¶ 37 (Timing, Amount, and Method of Disbursing Funds), has been satisfactorily completed, PSDs shall submit to EPA a Cost Summary and Certification, as defined in ¶ 38.b, covering the Work performed up to the date of completion of that milestone. PSDs shall not include in any submission costs included in a previous Cost Summary and Certification following completion of an earlier milestone of the Work if those costs have been previously sought or reimbursed pursuant to ¶ 37.

b. Each Cost Summary and Certification shall include a complete and accurate written cost summary and certification of the necessary costs incurred and paid by PSDs for the Work covered by the particular submission, excluding costs not eligible for disbursement under ¶ 39 (Costs Excluded from Disbursement). Each Cost Summary and Certification shall contain the following statement signed by an independent certified public accountant or other specified independent person acceptable to EPA:

To the best of my knowledge, after thorough investigation and review of PSDs’ documentation of costs incurred and paid for Work performed pursuant to this CD up to the date of completion of milestone __, I certify that the information contained in or accompanying this submission is true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

The independent certified public accountant or other specified independent person acceptable to EPA shall also provide EPA a list of the documents that he or she reviewed in support of the Cost Summary and Certification. Upon request by EPA, PSDs shall submit to EPA any additional information that EPA deems necessary for its review and approval of a Cost Summary and Certification.

c. If EPA finds that a Cost Summary and Certification includes a mathematical error, costs excluded under ¶ 39 (Costs Excluded from Disbursement), costs that are inadequately documented, or costs submitted in a prior Cost Summary and Certification, it will notify PSDs and provide them an opportunity to cure the deficiency by submitting a revised Cost Summary and Certification. If PSDs fail to cure the deficiency within 30 days after being notified of, and given the opportunity to cure, the deficiency, EPA will recalculate PSDs’ costs eligible for disbursement for that submission and disburse the corrected amount to PSDs in

accordance with the procedures in ¶ 37 (Timing, Amount, and Method of Disbursing Funds). PSDs may dispute EPA's recalculation under this Paragraph pursuant to Section XIV (Dispute Resolution). In no event shall PSDs be disbursed funds from the Ward Transformer Disbursement Special Account in excess of amounts properly documented in a Cost Summary and Certification accepted or modified by EPA.

39. **Costs Excluded from Disbursement.** The following costs are excluded from, and shall not be sought by PSDs for, disbursement from the Ward Transformer Disbursement Special Account: (a) response costs paid pursuant to Section X (Payments for Response Costs and Civil Penalties); (b) any other payments made by PSDs to the United States pursuant to this CD, including, but not limited to, any Interest or stipulated penalties paid pursuant to Section X (Payments for Response Costs and Civil Penalties) or XV (Stipulated Penalties); (c) attorneys' fees and costs, except for reasonable attorneys' fees and costs necessarily related to any obligations under the CD for which legal services are essential, such as obtaining access or institutional controls as required by Section VIII (Property Requirements); (d) costs of any response activities PSDs perform that are not required under, or approved by EPA pursuant to, this CD; (e) costs related to PSDs' litigation, settlement, development of potential contribution claims, or identification of defendants; (f) internal costs of PSDs, including but not limited to, salaries, travel, or in-kind services, except for those costs that represent the work of employees of PSDs directly performing the Work; (g) any costs incurred by PSDs prior to the Effective Date or (h) any costs incurred by PSDs pursuant to Section XIV (Dispute Resolution).

40. **Termination of Disbursements from the Special Account.** EPA's obligation to disburse funds from the Ward Transformer Disbursement Special Account under this CD shall terminate upon EPA's determination that PSDs: (a) have knowingly submitted a materially false or misleading Cost Summary and Certification; (b) have submitted a materially inaccurate or incomplete Cost Summary and Certification, and have failed to correct the materially inaccurate or incomplete Cost Summary and Certification within 30 days after being notified of, and given the opportunity to cure, the deficiency; or (c) failed to submit a Cost Summary and Certification as required by ¶ 38 (Requests for Disbursement of Special Account Funds) within 30 days (or such longer period as EPA agrees) after being notified that EPA intends to terminate its obligation to make disbursements pursuant to this Section because of PSDs' failure to submit the Cost Summary and Certification as required by ¶ 38. EPA's obligation to disburse funds from the Ward Transformer Disbursement Special Account shall also terminate upon EPA's assumption of performance of any portion of the Work pursuant to ¶ 78 (Work Takeover), when such assumption of performance of the Work is not challenged by PSDs or, if challenged, is upheld under Section XIV (Dispute Resolution). PSDs may dispute EPA's termination of special account disbursements under Section XIV.

41. **Recapture of Special Account Disbursements.** Upon termination of disbursements from the Ward Transformer Disbursement Special Account under ¶ 40 (Termination of Disbursements from the Special Account), if EPA has previously disbursed funds from the Ward Transformer Disbursement Special Account for activities specifically related to the reason for termination, e.g., discovery of a materially false or misleading submission after disbursement of funds based on that submission, EPA shall submit a bill to PSDs for those amounts already disbursed from the Ward Transformer Disbursement Special Account specifically related to the reason for termination, plus Interest on that amount covering the period from the date of disbursement of the funds by EPA to the date of repayment of the

funds by PSDs. Within 30 days after receipt of EPA's bill, PSDs shall reimburse the EPA Hazardous Substance Superfund for the total amount billed. Payment shall be made in accordance with ¶ 35.a. Upon receipt of payment, EPA may deposit all or any portion thereof in the Ward Transformer Special Account, the Ward Transformer Disbursement Special Account, or the EPA Hazardous Substance Superfund. The determination of where to deposit or how to use the funds shall not be subject to challenge by PSDs pursuant to the dispute resolution provisions of this CD or in any other forum. PSDs may dispute EPA's determination as to recapture of funds pursuant to Section XIV (Dispute Resolution).

42. **Balance of Special Account Funds.** After EPA issues its written Certification of RA Completion pursuant to this CD, and after EPA completes all disbursement to PSDs in accordance with this Section, if any funds remain in the Ward Transformer Disbursement Special Account, EPA may transfer such funds to the Ward Transformer Special Account or to the EPA Hazardous Substance Superfund. Any transfer of funds to the Ward Transformer Special Account or the EPA Hazardous Substance Superfund shall not be subject to challenge by PSDs pursuant to the dispute resolution provisions of this CD or in any other forum.

XII. INDEMNIFICATION AND INSURANCE

43. PSDs' Indemnification of the United States.

a. The United States does not assume any liability by entering into this CD or by virtue of any designation of PSDs as EPA's authorized representatives under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e). PSDs shall indemnify, save, and hold harmless the United States and its officials, agents, employees, contractors, subcontractors, and representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of PSDs, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on PSDs' behalf or under their control, in carrying out activities pursuant to this CD, including, but not limited to, any claims arising from any designation of PSDs as EPA's authorized representatives under Section 104(e) of CERCLA. Further, PSDs agree to pay the United States all costs it incurs including, but not limited to, attorneys' fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States based on negligent or other wrongful acts or omissions of PSDs, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this CD. The United States shall not be held out as a party to any contract entered into by or on behalf of PSDs in carrying out activities pursuant to this CD. Neither PSDs nor any such contractor shall be considered an agent of the United States.

b. The United States shall give PSDs notice of any claim for which the United States plans to seek indemnification pursuant to this ¶ 43, and shall consult with PSDs prior to settling such claim. Any dispute over a claim by the United States for indemnification shall be resolved pursuant to the dispute resolution procedures set forth in Section XIV (Dispute Resolution).

44. PSDs covenant not to sue and agree not to assert any claims or causes of action against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or

arrangement between any one or more of PSDs and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, PSDs shall indemnify, save and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of PSDs and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

45. **Insurance.** No later than 15 days before commencing any on-Site Work, PSDs shall secure, and shall maintain until the first anniversary after issuance of EPA's Certification of RA Completion pursuant to Section V, Task II, ¶ D.1 (Remedial Action Report) of the SOW commercial general liability insurance with limits of \$2,000,000, for any one occurrence, and automobile liability insurance with limits of \$2,000,000, combined single limit, naming the United States as an additional insured with respect to all liability arising out of the activities performed by or on behalf of PSDs pursuant to this CD. In addition, for the duration of this CD, PSDs shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of PSDs in furtherance of this CD. Prior to commencement of the Work, PSDs shall provide to EPA certificates of such insurance and a copy of each insurance policy. PSDs shall resubmit such certificates and copies of policies each year on the anniversary of the Effective Date. If PSDs demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, PSDs need provide only that portion of the insurance described above that is not maintained by the contractor or subcontractor.

XIII. FORCE MAJEURE

46. "Force majeure," for purposes of this CD, is defined as any event arising from causes beyond the control of PSDs, of any entity controlled by PSDs, or of PSDs' contractors that delays or prevents the performance of any obligation under this CD despite PSDs' best efforts to fulfill the obligation. The requirement that PSDs exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure and best efforts to address the effects of any potential force majeure (a) as it is occurring and (b) following the potential force majeure such that the delay and any adverse effects of the delay are minimized to the greatest extent possible. "Force majeure" does not include financial inability to complete the Work or a failure to achieve the Performance Standards.

47. If any event occurs or has occurred that may delay the performance of any obligation under this CD for which PSDs intend or may intend to assert a claim of force majeure, PSDs shall notify EPA's Project Coordinator orally or, in his or her absence, EPA's Alternate Project Coordinator or, in the event both of EPA's designated representatives are unavailable, the Director of the Superfund Division, EPA Region 4, within 5 days of when PSDs first knew that the event might cause a delay. Within 7 days thereafter, PSDs shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; PSDs' rationale for attributing such delay to a force majeure; and a statement as to whether, in the opinion of PSDs, such event may cause or contribute to an endangerment to public health or

welfare, or the environment. PSDs shall include with any notice all available documentation supporting their claim that the delay was attributable to a force majeure. PSDs shall be deemed to know of any circumstance of which PSDs, any entity controlled by PSDs, or PSDs' contractors or subcontractors knew or should have known. Failure to comply with the above requirements regarding an event shall preclude PSDs from asserting any claim of force majeure regarding that event, provided, however, that if EPA, despite the late or incomplete notice, is able to assess to its satisfaction whether the event is a force majeure under ¶ 46 and whether PSDs have exercised their best efforts under ¶ 46, EPA may, in its unreviewable discretion, excuse in writing PSDs' failure to submit timely or complete notices under this Paragraph.

48. If EPA agrees that the delay or anticipated delay is attributable to a force majeure, the time for performance of the obligations under this CD that are affected by the force majeure will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure, EPA will notify PSDs in writing of its decision. If EPA agrees that the delay is attributable to a force majeure, EPA will notify PSDs in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure.

49. If PSDs elect to invoke the dispute resolution procedures set forth in Section XIV (Dispute Resolution) regarding EPA's decision, they shall do so no later than 15 days after receipt of EPA's notice. In any such proceeding, PSDs shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that PSDs complied with the requirements of ¶¶ 46 and 47. If PSDs carry this burden, the delay at issue shall be deemed not to be a violation by PSDs of the affected obligation of this CD identified to EPA and the Court.

50. The failure by EPA to timely complete any obligation under the CD or under the SOW is not a violation of the CD, provided, however, that if such failure prevents PSDs from meeting one or more deadlines in the SOW, PSDs may seek relief under this Section.

XIV. DISPUTE RESOLUTION

51. Unless otherwise expressly provided for in this CD, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes regarding this CD. However, the procedures set forth in this Section shall not apply to actions by the United States to enforce obligations of PSDs that have not been disputed in accordance with this Section.

52. A dispute shall be considered to have arisen when one party sends the other parties a written Notice of Dispute. Any dispute regarding this CD shall in the first instance be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed 20 days from the time the dispute arises, unless it is modified by written agreement of the parties to the dispute.

53. Statements of Position.

a. In the event that the parties cannot resolve a dispute by informal negotiations under the preceding Paragraph, then the position advanced by EPA shall be considered binding unless, within 30 days after the conclusion of the informal negotiation period, the PSDs and, where applicable, Cashout Settling Defendants invoke the formal dispute resolution procedures of this Section by serving on the United States a written Statement of Position on the matter in dispute, including, but not limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the PSDs and, where applicable, Cashout Settling Defendants. The Statement of Position shall specify the PSDs' and, where applicable, Cashout Settling Defendants' position as to whether formal dispute resolution should proceed under ¶¶ 54 (Record Review) or 55.

b. Within 15 days after receipt of the PSDs' and, where applicable, Cashout Settling Defendants' Statement of Position, EPA will serve on the PSDs and, where applicable, Cashout Settling Defendants its Statement of Position, including, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by EPA. EPA's Statement of Position shall include a statement as to whether formal dispute resolution should proceed under ¶¶ 54 (Record Review) or 55. Within 15 days after receipt of EPA's Statement of Position, the PSDs and, where applicable, Cashout Settling Defendants may submit a reply.

c. If there is disagreement between EPA and the PSDs and, where applicable, Cashout Settling Defendants as to whether dispute resolution should proceed under ¶¶ 54 (Record Review) or 55, the parties to the dispute shall follow the procedures set forth in the Paragraph determined by EPA to be applicable. However, if PSDs and, where applicable, Cashout Settling Defendants ultimately appeal to the Court to resolve the dispute, the Court shall determine which Paragraph is applicable in accordance with the standards of applicability set forth in ¶¶ 54 and 55.

54. Record Review. Formal dispute resolution for disputes pertaining to the selection or adequacy of any response action and all other disputes that are accorded review on the administrative record under applicable principles of administrative law shall be conducted pursuant to the procedures set forth in this Paragraph. For purposes of this Paragraph, the adequacy of any response action includes, without limitation, the adequacy or appropriateness of plans, procedures to implement plans, or any other items requiring approval by EPA under this CD, and the adequacy of the performance of response actions taken pursuant to this CD. Nothing in this CD shall be construed to allow any dispute by PSDs and, where applicable, Cashout Settling Defendants regarding the validity of the OU1 ROD's provisions.

a. An administrative record of the dispute shall be maintained by EPA and shall contain all statements of position, including supporting documentation, submitted pursuant to this Section. Where appropriate, EPA may allow submission of supplemental statements of position by the parties to the dispute.

b. The Director of the Superfund Division, EPA Region 4, will issue a final administrative decision resolving the dispute based on the administrative record described in ¶ 54.a. This decision shall be binding upon PSDs and, where applicable, Cashout Settling Defendants, subject only to the right to seek judicial review pursuant to ¶¶ 54.c and 54.d.

c. Any administrative decision made by EPA pursuant to ¶ 54.b shall be reviewable by this Court, provided that a motion for judicial review of the decision is filed by PSDs and, where applicable, Cashout Settling Defendants with the Court and served on all Parties within 10 days after receipt of EPA's decision. The motion shall include a description of the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of this CD. The United States may file a response to PSDs' and, where applicable, Cashout Settling Defendants' motion.

d. In proceedings on any dispute governed by this Paragraph, PSDs and, where applicable, Cashout Settling Defendants shall have the burden of demonstrating that the decision of the Superfund Division Director is arbitrary and capricious or otherwise not in accordance with law. Judicial review of EPA's decision shall be on the administrative record compiled pursuant to ¶ 54.a.

55. Formal dispute resolution for disputes that neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record under applicable principles of administrative law, shall be governed by this Paragraph.

a. The Director of the Superfund Division, EPA Region 4, will issue a final decision resolving the dispute based on the statements of position and reply, if any, served under ¶ 53. The Superfund Division Director's decision shall be binding on PSDs and, where applicable, Cashout Settling Defendants unless, within 10 days after receipt of the decision, PSDs and, where applicable, Cashout Settling Defendants file with the Court and serve on the parties a motion for judicial review of the decision setting forth the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of the CD. The United States may file a response to PSDs' and, where applicable, Cashout Settling Defendants' motion.

b. Notwithstanding ¶ O (CERCLA § 113(j) record review of OU1 ROD and Work) of Section I (Background), judicial review of any dispute governed by this Paragraph shall be governed by applicable principles of law.

56. The invocation of formal dispute resolution procedures under this Section does not extend, postpone, or affect in any way any obligation of PSDs and, where applicable, Cashout Settling Defendants under this CD, except as provided in ¶ 34.c (Contesting Future Response Costs), as agreed by EPA, or as determined by the Court. Stipulated penalties with respect to the disputed matter shall continue to accrue, but payment shall be stayed pending resolution of the dispute, as provided in ¶ 64. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this CD. In the event that PSDs and, where applicable, Cashout Settling Defendants do not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XV (Stipulated Penalties).

XV. STIPULATED PENALTIES

57. PSDs shall be liable for stipulated penalties in the amounts set forth in ¶¶ 58 and 59 to the United States for failure to comply with the requirements of this CD specified below, unless excused under Section XIII (Force Majeure). "Compliance" by PSDs shall include

completion of all activities and obligations, including payments, required under this CD, or any deliverable approved under this CD, in accordance with all applicable requirements of law, this CD, the SOW, and any deliverables approved under this CD and within the specified time schedules established by and approved under this CD.

58. Stipulated Penalty Amounts - Work (Including Payments of Future Response Costs and Excluding Deliverables) and Payment of Civil Penalties by Carr & Duff, Inc.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in ¶ 58.b:

Period of Noncompliance	Penalty Per Violation Per Day
1st through 14th day	\$2000
15th through 30th day	\$2500
31st day and beyond	\$3000

b. Compliance Milestones.

- (1) Failure to timely or adequately submit a draft, modified or final:
 - (a) RD Work Plan
 - (b) Prefinal (90%)/Final Design
 - (c) RA Work Plan
 - (d) Final Construction Report
 - (e) Performance Standards Verification Plan
 - (f) Proof of Insurance
- (2) Failure to establish or maintain financial assurance in compliance with the timelines and other substantive and procedural requirements of Section IX (Financial Assurance).
- (3) Failure to timely pay Future Response Costs as required by ¶ 34.
- (4) Failure to timely pay civil penalties as required by ¶ 33 (applicable only to Settling Repair Defendant Carr & Duff, Inc.).

59. Stipulated Penalty Amounts - Deliverables.

a. **Material Defects.** If an initially submitted or resubmitted deliverable contains a material defect, and the deliverable is disapproved or modified by EPA under Section V (Planning and Deliverables) of the SOW due to such material defect, then the material defect shall constitute a lack of compliance for purposes of ¶ 57. The provisions of Section XIV (Dispute Resolution) and Section XV (Stipulated Penalties) shall govern the accrual and payment of any stipulated penalties regarding PSDs' submissions under this CD.

b. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate deliverables pursuant to the CD:

Period of Noncompliance	Penalty Per Violation Per Day
1st through 14th day	\$1000
15th through 30th day	\$1500
31st day and beyond	\$2000

60. In the event that EPA assumes performance of a portion or all of the Work pursuant to ¶ 78 (Work Takeover), PSDs shall be liable for a stipulated penalty in the amount of \$500,000. Stipulated penalties under this Paragraph are in addition to the remedies available under ¶¶ 29 (Access to Financial Assurance) and 78 (Work Takeover).

61. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Section V (Planning and Deliverables) of the SOW, during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies PSDs of any deficiency; (b) with respect to a decision by the Director of the Superfund Division, EPA Region 4, under ¶¶ 54.b or 55.a of Section XIV (Dispute Resolution), during the period, if any, beginning on the 21st day after the date that PSDs' reply to EPA's Statement of Position is received until the date that the Director issues a final decision regarding such dispute; or (c) with respect to judicial review by this Court of any dispute under Section XIV (Dispute Resolution), during the period, if any, beginning on the 31st day after the Court's receipt of the final submission regarding the dispute until the date that the Court issues a final decision regarding such dispute. Nothing in this CD shall prevent the simultaneous accrual of separate penalties for separate violations of this CD.

62. Following EPA's determination that PSDs have failed to comply with a requirement of this CD, EPA may give PSDs written notification of the same and describe the noncompliance. EPA may send PSDs a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified PSDs of a violation.

63. All penalties accruing under this Section shall be due and payable to the United States within 30 days after PSDs' receipt from EPA of a demand for payment of the penalties, unless PSDs invoke the Dispute Resolution procedures under Section XIV (Dispute Resolution) within the 30-day period. All payments to the United States under this Section shall indicate that the payment is for stipulated penalties and shall be made in accordance with ¶ 35.a.

64. Penalties shall continue to accrue as provided in ¶ 61 during any dispute resolution period, but need not be paid until the following:

a. If the dispute is resolved by agreement of the parties or by a decision of EPA that is not appealed to this Court, accrued penalties determined to be owed shall be paid to EPA within 15 days after the agreement or the receipt of EPA's decision or order;

b. If the dispute is appealed to this Court and the United States prevails in whole or in part, PSDs shall pay all accrued penalties determined by the Court to be owed to EPA within 60 days after receipt of the Court's decision or order, except as provided in ¶ 64.c;

c. If the District Court's decision is appealed by any Party, PSDs shall pay all accrued penalties determined by the District Court to be owed to the United States into an interest-bearing escrow account, established at a duly chartered bank or trust company that is insured by the FDIC, within 60 days after receipt of the Court's decision or order. Penalties shall be paid into this account as they continue to accrue, at least every 60 days. Within 15 days after receipt of the final appellate court decision, the escrow agent shall pay the balance of the account to EPA or to PSDs to the extent that they prevail.

65. If PSDs fail to pay stipulated penalties when due, PSDs shall pay Interest on the unpaid stipulated penalties as follows: (a) if PSDs have timely invoked dispute resolution such that the obligation to pay stipulated penalties has been stayed pending the outcome of dispute resolution, Interest shall accrue from the date stipulated penalties are due pursuant to ¶ 64 until the date of payment; and (b) if PSDs fail to timely invoke dispute resolution, Interest shall accrue from the date of the demand under ¶ 63 until the date of payment. If PSDs fail to pay stipulated penalties and Interest when due, the United States may institute proceedings to collect the penalties and Interest.

66. The payment of penalties and Interest, if any, shall not alter in any way PSDs' obligation to complete the performance of the Work required under this CD.

67. Nothing in this CD shall be construed as prohibiting, altering, or in any way limiting the ability of the United States to seek any other remedies or sanctions available by virtue of PSDs' violation of this CD or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), provided, however, that the United States shall not seek civil penalties pursuant to Section 122(l) of CERCLA for any violation for which a stipulated penalty is provided in this CD, except in the case of a willful violation of this CD.

68. Notwithstanding any other provision of this Section, the United States may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this CD.

XVI. COVENANTS BY PLAINTIFF

69. Covenants for PSDs by United States.

Except as provided in ¶¶ 74, 75 (United States' Pre- and Post-Certification Reservations), and 77 (General Reservations of Rights), the United States covenants not to sue or to take administrative action against PSDs pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. Except with respect to future liability, these covenants shall take effect upon the Effective Date. With respect to future liability, these covenants shall take effect upon Certification of RA Completion by EPA pursuant to Section V, Task II, ¶ D.1 (Remedial Action Report) of the SOW. These covenants are conditioned upon the satisfactory performance by PSDs of their obligations under this CD. These covenants extend only to PSDs and do not extend to any other person.

70. Covenants for Cashout Settling Defendants by United States.

Except as provided in ¶¶ 74, 75 (United States' Pre- and Post-Certification Reservations), and 77 (General Reservations of Rights), the United States covenants not to sue or to take

administrative action against Cashout Settling Defendants pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. These covenants shall take effect upon the Effective Date. These covenants extend only to Cashout Settling Defendants and do not extend to any other person.

71. Covenants for Sales-Only Cashout Settling Defendants by United States.

Except as provided in ¶ 77 (General Reservations of Rights), the United States covenants not to sue or to take administrative action against Sales-Only Cashout Settling Defendants pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. These covenants shall take effect upon the Effective Date. These covenants extend only to Sales-Only Cashout Settling Defendants and do not extend to any other person.

72. Covenants for Cashout Settling Federal Agencies.

Except as provided in ¶¶ 74, 75 (United States' Pre- and Post-Certification Reservations), and 77 (General Reservations of Rights), EPA covenants not to take administrative action against Cashout Settling Federal Agencies pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. These covenants shall take effect upon the Effective Date. These covenants extend only to Cashout Settling Federal Agencies and do not extend to any other person.

73. Covenants for Sales-Only Cashout Settling Federal Agency.

Except as provided in ¶ 77 (General Reservations of Rights), EPA covenants not to take administrative action against Sales-Only Cashout Settling Federal Agency pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. These covenants shall take effect upon the Effective Date. These covenants extend only to Sales-Only Cashout Settling Federal Agency and do not extend to any other person.

74. United States' Pre-Certification Reservations. Notwithstanding any other provision of this CD, the United States reserves, and this CD is without prejudice to, the right to institute proceedings in this action or in a new action, and/or to issue an administrative order, seeking to compel PSDs and Cashout Settling Defendants, and EPA reserves the right to issue an administrative order seeking to compel Cashout Settling Federal Agencies, to perform further response actions relating to the Site and/or to pay the United States for additional costs of response if, (a) prior to Certification of RA Completion, (1) conditions at the Site, previously unknown to EPA, are discovered, or (2) information, previously unknown to EPA, is received, in whole or in part, and (b) EPA determines that these previously unknown conditions or information together with other relevant information indicates that the RA is not protective of human health or the environment.

75. United States' Post-Certification Reservations. Notwithstanding any other provision of this CD, the United States reserves, and this CD is without prejudice to, the right to institute proceedings in this action or in a new action, and/or to issue an administrative order, seeking to compel PSDs and Cashout Settling Defendants, and EPA reserves the right to issue an administrative order seeking to compel Cashout Settling Federal Agencies, to perform further response actions relating to the Site and/or to pay the United States for additional costs of response if, (a) subsequent to Certification of RA Completion, (1) conditions at the Site, previously unknown to EPA, are discovered, or (2) information, previously unknown to EPA, is received, in whole or in part, and (b) EPA determines that these previously unknown conditions

or this information together with other relevant information indicate that the RA is not protective of human health or the environment.

76. For purposes of ¶ 74 (United States' Pre-Certification Reservations), the information and the conditions known to EPA will include only that information and those conditions known to EPA as of November 24, 2015, the date that certain UAO Parties submitted a report entitled "Annual Status Update, November 2015, Ward Transformer OU1 Superfund Site, Raleigh, North Carolina" to EPA. For purposes of ¶ 75 (United States' Post-Certification Reservations), the information and the conditions known to EPA shall include only that information and those conditions known to EPA as of the date of Certification of RA Completion and set forth in the OU1 ROD, the administrative record supporting the OU1 ROD, the post-OU1 ROD administrative record, or in any information received by EPA pursuant to the requirements of this CD prior to Certification of RA Completion.

77. General Reservations of Rights.

a. **Reservations of Rights Against All SDs and SFAs.** The United States reserves, and this CD is without prejudice to, all rights against SDs, and EPA and the federal natural resource trustees reserve, and this CD is without prejudice to, all rights against SFAs, with respect to all matters not expressly included within Plaintiff's covenants. Notwithstanding any other provision of this CD, the United States reserves all rights against SDs, and EPA and the federal natural resource trustees reserve all rights against SFAs, with respect to:

(1) liability for failure by SDs or SFAs to meet a requirement of this CD applicable to them;

(2) liability arising from the past, present, or future disposal, release, or threat of release of Waste Material outside of the Site;

(3) liability based on the ownership of the Site by SDs or SFAs when such ownership commences after signature of this CD by SDs or SFAs;

(4) liability based on the operation of the Site by SDs when such operation commences after signature of this CD by SDs and does not arise solely from PSDs' performance of the Work and liability based on the operation of the Site by SFAs when such operation commences after signature of this CD by SFAs;

(5) liability based on SDs' transportation, treatment, storage, or disposal, or arrangement for transportation, treatment, storage, or disposal of Waste Material at or in connection with the Site, other than as provided in the OU1 ROD, the Work, or otherwise ordered by EPA, after signature of this CD by SDs;

(6) liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments; and

(7) criminal liability.

b. **Additional Reservation of Rights Against PSDs.** Notwithstanding any other provision of this CD, the United States reserves all rights against PSDs with respect to

liability for violations of federal or state law that occur during or after implementation of the Work.

c. **Additional Reservations of Rights Against OU2 RI/FS AOC Parties.**

Notwithstanding any other provision of this CD, the United States reserves all rights against Consol, Duke, and PCS, and EPA reserves all rights against SFAs, with respect to the payment of response costs pursuant to Section XVIII of the OU2 RI/FS AOC.

78. **Work Takeover.**

a. In the event EPA determines that PSDs: (1) have ceased implementation of any portion of the Work; (2) are seriously or repeatedly deficient or late in their performance of the Work; or (3) are implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice (“Work Takeover Notice”) to PSDs. Any Work Takeover Notice issued by EPA will specify the grounds upon which such notice was issued and will provide PSDs a period of 10 days within which to remedy the circumstances giving rise to EPA’s issuance of such notice.

b. If, after expiration of the 10-day notice period specified in ¶ 78.a, PSDs have not remedied to EPA’s satisfaction the circumstances giving rise to EPA’s issuance of the relevant Work Takeover Notice, EPA may at any time thereafter assume the performance of all or any portion(s) of the Work as EPA deems necessary (“Work Takeover”). EPA will notify PSDs in writing (which writing may be electronic) if EPA determines that implementation of a Work Takeover is warranted under this ¶ 78.b. Funding of Work Takeover costs is addressed under ¶ 29 (Access to Financial Assurance).

c. PSDs may invoke the procedures set forth in ¶ 54 (Record Review), to dispute EPA’s implementation of a Work Takeover under ¶ 78.b. However, notwithstanding PSDs’ invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion commence and continue a Work Takeover under ¶ 78.b until the earlier of (1) the date that PSDs remedy, to EPA’s satisfaction, the circumstances giving rise to EPA’s issuance of the relevant Work Takeover Notice, or (2) the date that a final decision is rendered in accordance with ¶ 54 (Record Review) requiring EPA to terminate such Work Takeover.

79. Notwithstanding any other provision of this CD, the United States retains all authority and reserves all rights to take any and all response actions authorized by law.

XVII. COVENANTS BY SDs AND SFAs

80. **Covenants by SDs.** Subject to the reservations in ¶ 83, SDs covenant not to sue and agree not to assert any claims or causes of action against the United States with respect to the Site, and this CD, including, but not limited to:

a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund through CERCLA §§ 106(b)(2), 107, 111, 112 or 113, or any other provision of law;

b. any claims under CERCLA §§ 107 or 113, RCRA Section 7002(a), 42 U.S.C. § 6972(a), or state law regarding the Site and this CD; or

c. any claims arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the North Carolina Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, or at common law.

d. any direct or indirect claim for disbursement from the Ward Transformer Special Account or Ward Transformer Disbursement Special Account, except as provided in Section XI (Disbursement of Special Account Funds).

81. **Covenant by SFAs.** SFAs agree not to assert any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund through CERCLA §§ 106(b)(2), 107, 111, 112, or 113, or any other provision of law with respect to the Site and this CD. This covenant does not preclude demand for reimbursement from the Superfund of costs incurred by an SFA in the performance of its duties (other than pursuant to this CD) as lead or support agency under the NCP.

82. Except as provided in ¶¶ 85 (Waiver of Claims by SDs) and 92 (Res Judicata and Other Defenses), the covenants in this Section shall not apply if the United States brings a cause of action or issues an order pursuant to any of the reservations in Section XVI (Covenants by Plaintiff), other than in ¶¶ 77.a(1) (claims for failure to meet a requirement of the CD), 77.a(7) (criminal liability), and 77.b (violations of federal/state law during or after implementation of the Work), but only to the extent that SDs' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

83. SDs reserve, and this CD is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, and brought pursuant to any statute other than CERCLA or RCRA and for which the waiver of sovereign immunity is found in a statute other than CERCLA or RCRA, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States, as that term is defined in 28 U.S.C. § 2671, while acting within the scope of his or her office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, the foregoing shall not include any claim based on EPA's selection of response actions, or the oversight or approval of PSDs' deliverables or activities. SDs also reserve, and this CD is without prejudice to, contribution claims against SFAs in the event any claim is asserted by the United States against SDs pursuant to any of the reservations in Section XVI (Covenants by Plaintiff) other than in ¶¶ 77.a(1) (claims for failure to meet a requirement of the CD), 77.a(7) (criminal liability), and 77.b (violations of federal/state law during or after implementation of the Work), but only to the extent that SDs' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

84. Nothing in this CD shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

85. Waiver of Claims by SDs.

a. SDs agree not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that they may have for the “matters addressed” in this CD, as defined in ¶ 87, against each other or any other person who is a potentially responsible party under CERCLA at the Site, with the exception of Sales-Only Cashout Settling Defendants. With respect to Sales-Only Cashout Settling Defendants, SDs agree not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that they may have for response costs relating to the Site against Sales-Only Cashout Settling Defendants. The waivers in this Paragraph shall not apply with respect to any defense, claim, or cause of action that an SD may have against any person if such person asserts a claim or cause of action relating to the Site against such SD.

b. If the total amount of response costs incurred by the Trust to implement the Work required under this Consent Decree exceeds \$5,000,000, the waiver in ¶ 85.a also shall not apply to claims by the Trust for that portion of the response costs incurred by the Trust to implement the Work that are in excess of \$5,000,000 against any person who is not an SD or who has not entered into a settlement that resolves its CERCLA liability to the United States in connection with the Site.

c. **De Micromis Waiver.** Notwithstanding ¶ 85.b, even if the total amount of response costs incurred by the Trust to implement the Work required under this Consent Decree exceeds \$5,000,000, SDs agree not to assert any claims and waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that they may have for all matters relating to the Site against any person where the person’s liability to SDs with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials.

d. **Exceptions to Waiver.** The waiver under ¶ 85.c shall not apply to any claim or cause of action against any person otherwise covered by such waiver if EPA determines that: (i) the materials containing hazardous substances contributed to the Site by such person contributed significantly or could contribute significantly, either individually or in the aggregate, to the cost of the response action or natural resource restoration at the Site; or (ii) such person has failed to comply with any information request or administrative subpoena issued pursuant to Section 104(e) or 122(e)(3)(B) of CERCLA, 42 U.S.C. § 9604(e) or 9622(e)(3)(B), or Section 3007 of RCRA, 42 U.S.C. § 6927, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site; or if (iii) such person has been convicted of a criminal violation for the conduct to which the waiver would apply and that conviction has not been vitiated on appeal or otherwise.

XVIII. EFFECT OF SETTLEMENT; CONTRIBUTION

86. Except as provided in ¶ 85 (Waiver of Claims by SDs), nothing in this CD shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this CD. Except as provided in Section XVII (Covenants by SDs and SFAs), each of the Parties expressly reserves any and all rights (including, but not limited to, pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613), defenses, claims, demands, and causes of action that each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto. Nothing in this CD diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

87. The Parties agree, and by entering this CD this Court finds, that this CD constitutes a judicially-approved settlement pursuant to which each SD and each Settling Federal Agency has, as of the Effective Date, resolved liability to the United States within the meaning of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Section 113(f)(2) of CERCLA, or as may be otherwise provided by law, for the “matters addressed” in this CD. The “matters addressed” in this CD are all response actions taken or to be taken and all response costs incurred or to be incurred, at or in connection with the Site, by the United States or any other person, except for the State; provided, however, that if the United States exercises rights against SDs (or if EPA or the federal natural resource trustee asserts rights against SFAs) under the reservations in Section XVI (Covenants by Plaintiff), other than in ¶ 77.a(1) (claims for failure to meet a requirement of the CD), 77.a(7) (criminal liability), or 77.b (violations of federal/state law during or after implementation of the Work), the “matters addressed” in this CD will no longer include those response costs or response actions that are within the scope of the exercised reservation.

88. The Parties further agree, and by entering this CD this Court finds, that the complaint filed by the United States in this action is a civil action within the meaning of Section 113(f)(1) of CERCLA, 42 U.S.C. § 9613(f)(1), and that this CD constitutes a judicially-approved settlement pursuant to which each Settling Defendant and each SFA has, as of the Effective Date, resolved liability to the United States within the meaning of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B).

89. Each SD shall, with respect to any suit or claim brought by it for matters related to this CD, notify the United States in writing no later than 60 days prior to the initiation of such suit or claim.

90. Each SD shall, with respect to any suit or claim brought against it for matters related to this CD, notify in writing the United States within 10 days after service of the complaint on such SD. In addition, each SD shall notify the United States within 10 days after service or receipt of any Motion for Summary Judgment and within 10 days after receipt of any order from a court setting a case for trial.

91. Upon the Effective Date of this CD, the UAO is terminated as to the UAO Parties.

92. **Res Judicata and Other Defenses.** In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, recovery of response costs, or other appropriate relief relating to the Site, SDs shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenants not to sue set forth in Section XVI (Covenants by Plaintiff).

XIX. ACCESS TO INFORMATION

93. PSDs shall provide to EPA, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within PSDs' possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this CD, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Work. PSDs shall also make available to EPA for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

94. Privileged and Protected Claims.

a. PSDs may assert that all or part of a Record requested by Plaintiff is privileged or protected as provided under federal law, in lieu of providing the Record, provided PSDs comply with ¶ 94.b, and except as provided in ¶ 94.c.

b. If PSDs assert a claim of privilege or protection, they shall provide Plaintiff with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, PSDs shall provide the Record to Plaintiff in redacted form to mask the privileged or protected portion only. PSDs shall retain all Records that they claim to be privileged or protected until Plaintiff has had a reasonable opportunity to dispute the privilege or protection claim and any such dispute has been resolved in the PSDs' favor.

c. PSDs may make no claim of privilege or protection regarding: (1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that PSDs are required to create or generate pursuant to this CD.

95. **Business Confidential Claims.** PSDs may assert that all or part of a Record provided to Plaintiff under this Section or Section XX (Retention of Records) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). PSDs shall segregate and clearly identify all Records or parts thereof submitted under this CD for which PSDs assert business confidentiality claims. Records submitted to EPA determined to be confidential by EPA will be afforded the

protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA, or if EPA has notified PSDs that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to PSDs.

96. If relevant to the proceeding, the Parties agree that validated sampling or monitoring data generated in accordance with the SOW and reviewed and approved by EPA shall be admissible as evidence, without objection, in any proceeding under this CD.

97. Notwithstanding any provision of this CD, Plaintiff retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XX. RETENTION OF RECORDS

98. Until 10 years after EPA's Certification of Work Completion under Section V, Task II, ¶ D.1 (Remedial Action Report) of the SOW, each PSD shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to its liability under CERCLA with respect to the Site, provided, however, that SDs who are potentially liable as owners or operators of the Site must retain, in addition, all Records that relate to the liability of any other person under CERCLA with respect to the Site. Each PSD must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, provided, however, that each PSD (and its contractors and agents) must retain, in addition, copies of all data generated during the performance of the Work and not contained in the aforementioned Records required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

99. The United States acknowledges that each SFA (a) is subject to all applicable federal record retention laws, regulations, and policies; and (b) has certified that it has fully complied with any and all EPA and State requests for information regarding the Site pursuant to Sections 104(e) and 122(e)(3)(B) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e)(3)(B), and Section 3007 of RCRA, 42 U.S.C. § 6927, and state law.

100. At the conclusion of this record retention period, PSDs shall notify the United States at least 90 days prior to the destruction of any such Records, and, upon request by the United States, and except as provided in ¶ 94 (Privileged and Protected Claims), they shall deliver any such Records to EPA.

101. Each SD certifies individually that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by the United States or the State and that it has fully complied with any and all EPA and State requests for information regarding the Site pursuant to Sections 104(e) and 122(e)(3)(B) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e)(3)(B), and Section 3007 of RCRA, 42 U.S.C. § 6927, and state law.

XXI. NOTICES AND SUBMISSIONS

102. All approvals, consents, deliverables, modifications, notices, notifications, objections, proposals, reports, and requests specified in this CD must be in writing unless otherwise specified. Whenever, under this CD, notice is required to be given, or a report or other document is required to be sent, by one Party to another, it must be directed to the person(s) specified below at the addresses specified below. Any Party may change the person and/or address applicable to it by providing notice of such change to all Parties. All notices under this Section are effective upon receipt, unless otherwise specified. Notices required to be sent to EPA, and not to the United States, should not be sent to the DOJ. Except as otherwise provided, notice to a Party by email (if that option is provided below) or by regular mail in accordance with this Section satisfies any notice requirement of the CD regarding such Party.

As to the United States:

EES Case Management Unit
U.S. Department of Justice
Environment and Natural Resources Division
P.O. Box 7611
Washington, D.C. 20044-7611
eescdcopy.enrd@usdoj.gov
Re: DJ # 90-11-2-07152/2

and:

Chief
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Defense Section
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-11-6-17915/1

As to EPA:

Director, Superfund Division
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street, Atlanta, GA 30303
hill.franklin@epa.gov

and:

Hilary Thornton
EPA Project Coordinator
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street, Atlanta, GA 30303
thornton.hilary@epa.gov
404-562-8809

As to the Program Analyst:

Paula Painter
Program Analyst
61 Forsyth Street, Atlanta, GA 30303
painter.paula@epa.gov

As to EPA Cincinnati Finance Center:

EPA Cincinnati Finance Center
26 W. Martin Luther King Drive
Cincinnati, OH 45268
cinwd_acctsreceivable@epa.gov

As to PSDs:

Brett Berra PE, RSM
AECOM
1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560
Brett.berra@aecom.com
(919) 461-1290

As to Carr & Duff, Inc.:

Edward J. Duff
Carr & Duff, Inc.
2100 Byberry Road
Huntingdon Valley, PA 19006
(215) 672-4200

and:

Mason Avrigian, Jr., Esquire
Jeffrey P. Wallack, Esquire
Wisler Pearlstine, LLP
Blue Bell Executive Campus
460 Norristown Road
Suite 110
Blue Bell, PA 19422-2323
mavrigian@wispearl.com
jwallack@wispearl.com
(610) 825-8400

XXII. RETENTION OF JURISDICTION

103. This Court retains jurisdiction over both the subject matter of this CD and SDs for the duration of the performance of the terms and provisions of this CD for the purpose of enabling any of the Parties to apply to the Court at any time for such further order, direction, and relief as may be necessary or appropriate for the construction or modification of this CD, or to effectuate or enforce compliance with its terms, or to resolve disputes in accordance with Section XIV (Dispute Resolution).

XXIII. APPENDICES

104. The following appendices are attached to and incorporated into this CD:

“Appendix A” is the list of Sales-Only Cashout Settling Defendants, and reflects the amount each shall pay to the Trust pursuant to ¶ 32.a.

“Appendix B” is the list of Cashout Settling Defendants, and reflects the amount each shall pay to the Trust pursuant to ¶ 32.a.

“Appendix C” is the list of Settling Repair Defendants, and reflects the initial amount each shall pay to the Trust pursuant to ¶ 32.a, and the percentage shares of any future assessments issued by the Trust pursuant to ¶ 32.b.

“Appendix D” is the list of UAO Parties.

“Appendix E” is the map of the Site.

“Appendix F” is the OU1 ROD.

“Appendix G” is the SOW.

XXIV. MODIFICATION

105. Except as provided in ¶ 13 (Modification of SOW or Related Deliverables), material modifications to this CD, including the SOW, shall be in writing, signed by the United States and SDs, and shall be effective upon approval by the Court. Except as provided in ¶ 13, non-material modifications to this CD, including the SOW, shall be in writing and shall be effective when signed by duly authorized representatives of the United States and SDs. A modification to the SOW shall be considered material if it implements an OU1 ROD amendment that fundamentally alters the basic features of the selected remedy within the meaning of 40 C.F.R. § 300.435(c)(2)(ii). Before providing its approval to any modification to the SOW, the United States will provide the State with a reasonable opportunity to review and comment on the proposed modification.

106. Any modification that does not affect the obligations of or the protections afforded to SDs that are not PSDs may be executed without the signatures of such SDs.

107. Nothing in this CD shall be deemed to alter the Court’s power to enforce, supervise, or approve modifications to this CD.

XXV. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

108. This CD shall be lodged with the Court for at least 30 days for public notice and comment in accordance with Section 122(d)(2) of CERCLA, 42 U.S.C. § 9622(d)(2), and 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the CD disclose facts or considerations that indicate that the CD is inappropriate, improper, or inadequate. SDs consent to the entry of this CD without further notice.

109. If for any reason the Court should decline to approve this CD in the form presented, this agreement is voidable at the sole discretion of any Party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

XXVI. SIGNATORIES/SERVICE

110. Each undersigned representative of an SD to this CD and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this CD and to execute and legally bind such Party to this document.

111. Each SD agrees not to oppose entry of this CD by this Court or to challenge any provision of this CD unless the United States has notified SDs in writing that it no longer supports entry of the CD.

112. Each SD shall identify, on the attached signature page, the name, address, and telephone number of an agent or counsel who is authorized to accept service of process by mail or email on behalf of that Party with respect to all matters arising under or relating to this CD. SDs agree to accept service in that manner and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including, but not limited to, service of a summons. SDs need not file an answer to the complaint in this action unless or until the Court expressly declines to enter this CD.

XXVII. FINAL JUDGMENT

113. This CD and its appendices constitute the final, complete, and exclusive agreement and understanding among the Parties regarding the settlement embodied in the CD. The Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this CD.

114. Upon entry of this CD by the Court, this CD shall constitute a final judgment between and among the United States and SDs. The Court enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

SO ORDERED THIS 22ND DAY OF NOVEMBER, 2016.


A handwritten signature in black ink, reading "Xavier W. Eloragan". The signature is written in a cursive, flowing style. Below the signature is a horizontal line.


United States District Judge

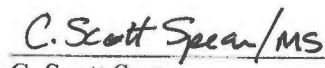
Signature Page for CD regarding the Ward Transformer Superfund Site

9/12/16
Dated

FOR THE UNITED STATES OF AMERICA:



John C. Cruden
Assistant Attorney General
U.S. Department of Justice
Environment and Natural Resources Division
Washington, D.C. 20530


Mark Sabath
Senior Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Enforcement Section
P.O. Box 7611
Washington, D.C. 20044-7611


C. Scott Spear
Trial Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Defense Section
P.O. Box 7611
Washington, D.C. 20044-7611

JOHN STUART BRUCE
Acting United States Attorney

BY:


G. Norman Acker, III
Assistant United States Attorney
Chief, Civil Division
310 New Bern Avenue
Suite 800 Federal Building
Raleigh, NC 27601-1461

Signature Page for CD regarding the Ward Transformer Superfund Site

8/29/16
Dated



Franklin E. Hill
Director, Superfund Division
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street SW
Atlanta, GA 30303




C. Jade Rutland
Associate Regional Counsel
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street SW
Atlanta, GA 30303

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR North Georgia Electric Membership Corporation
[Print Name of Party]

8/1/16
Date


Name (print): KATHRYN D. WEST
Title: President/CEO
Address: P.O. Box 1407 Dalton, GA 30722-1407

Agent Authorized to Accept Service
on behalf of Above-signed Party:

Name: Henry C. Tharpe, Jr.
Title: Outside General Counsel
Company: Sponcier & Tharpe, LLC
Address: 225 W. King Street, P.O. Box 398
Dalton, Georgia 30722-0398
Phone Number: 706-278-5211
Email: htharpe@daltongalaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR 3M Company :
[Print name of Settling Defendant]

8/4/16
Dated

J. R. Kotsmith
Name (print): James R. Kotsmith
Title: Manager, 3M Corp. Env. Programs
Address: 3M Center, Bldg. 224-5W-17
St. Paul, MN 55024

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Donald J. Camerson II
Title: ATTORNEY
Company: Bressler Amery & Ross, P.C.
Address: 325 Columbia Turnpike
Florence Park, N.J. 07932
Phone: 973-660-4433
email: djcamerson@bressler.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR :
[Print name of Settling Defendant]

8/16/16
Dated

Jay A. Porter
Name (print):
Title: CEO, Adams-Columbia Electric Cooperative
Address: 401 East Lake Street POB 70
Friendship WI 53934

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Aerojet Rocketdyne Holdings, Inc.,
formerly named GenCorp Inc.
[Print name of Settling Defendant]

8/11/16

Dated

Kathleen E. Redd
Name: Kathleen E. Redd
Title: Vice President, Chief
Financial Officer and
Assistant Secretary
Address: P.O. Box 13222
Sacramento, CA 95813


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): William E. Hvidsten
Title: Senior Counsel, Environmental
Company: Aerojet Rocketdyne Holdings, Inc.,
formerly named GenCorp Inc.
Address: 2001 Aerojet Road
Rancho Cordova, CA 95742
Phone: 916-351-8524
email: william.hvidsten@Rocket.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Air Products and Chemicals, Inc. :
[Print name of Settling Defendant]

8/2/16
Dated


Name (print): Todd Solodar
Title: Senior EH&S Counsel
Address: 7201 Hamilton Boulevard
Allentown, PA 18195

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Todd Solodar
Title: Senior EH&S Counsel
Company: Air Products and Chemicals, Inc.
Address: 7201 Hamilton Boulevard
Allentown, PA 18195
Phone: (610)481-2558
email: solodate@airproducts.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Akers National Roll Company :
[Print name of Settling Defendant]



Dated

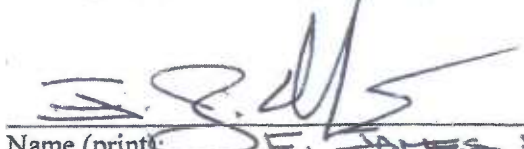
Name (print): Rose Hoover
Title: Vice President
Address: 726 Bell Avenue, Suite 301
Carnegie, PA 15106

Agent Authorized to Accept Service Name (print): Joshua D. Baker, Esq.
on Behalf of Above-signed Party: Title: Counsel
Company: Metz Lewis Brodman Must O'Keefe
Address: 535 Smithfield Street, Suite 800
Pittsburgh, PA 15222
Phone: (412) 918-1100
email: jbaker@metzlewis.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Alcan Primary Products Corporation
[Print name of Settling Defendant]

Aug 9/2016
Dated


Name (print): F. JAMES DICKSON
Title: PRESIDENT - ALCAN PRIMARY PRODUCTS CORPORATION
Address: 6150 PARKLAND BLVD.
CLEVELAND, OHIO 44124

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Hal J. Pos
Title: Counsel
Company: Parsons Behle & Lotimer
Address: 201 S. Main Street, Ste. 1800
Salt Lake City, UT 84111
Phone: 801-536-6725
email: hpos@parsonsbhle.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR

Alcoa Inc.

August 2, 2016

Dated

John Kenna

Name (print):

Title: Vice President, Tax

Address: 201 Isabella Street

Pittsburgh, PA 15212

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Franklin W. Boenning, Esq.

Title: Attorney

Company: Franklin W Boenning, LLC

Address: 1577 Grouse Lane

Mountainside, NJ 07092


Phone: 908-928-0301

email: fwblaw@comcast.net

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR AMERICAN BILTRITE INC.
[Print name of Settling Defendant]

7/25/16
Dated

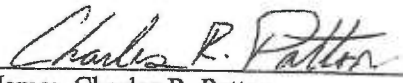

Name (print): HOWARD N. FEIST
Title: VP-FINANCE
Address: 57 RIVER ST. SUITE 302
WELLESLEY HILLS, MA 02481

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): HOWARD FEIST
Title: VP-FINANCE
Company: AMERICAN BILTRITE
Address: 57 RIVER ST. SUITE 302
WELLESLEY HILLS, MA 02481
Phone: 781-237-6655
email: SFEIST@AMBILT.COM

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Appalachian Power Company
[Print name of Settling Defendant]

August 10, 2016
Dated


Name: Charles R. Patton
Title: President & COO
Address: Laidley Tower Suite 800
500 Lee St. East
Charleston, WV 25301

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Charles R. Patton
Title: President & COO
Company: Appalachian Power Co.
Address: Laidley Tower Suite 800
500 Lee St., East
Charleston, WV 25301
Phone: (304)348-4152
email: crpatton@aep.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Arkema Inc. :

July 22, 2016
Dated


Name (print): William J. Hamel

Title: Sr. Vice President and General Counsel

Address: 900 First Avenue
King of Prussia, PA 19406

Agent Authorized to Accept Service Corporation Service Company
2595 Interstate Drive, Suite 103
Harrisburg, PA 17110

Phone: (717) 526-4330

E-mail: N/A

Signature Page for CD regarding the Ward Transformer Superfund Site

Board of Regents of University System of Georgia
on behalf of Augusta University
formerly known as Augusta State University

8-18-16

Dated


Anthony E. Wagner, M.Ed.
Exec VP for Administration & Finance/CBO

Agent Authorized to Accept Service	Name (print):	-	
on Behalf of Above-signed Party:	Title:	-	Name: Samuel C. Burch, Esq.
	Company:	-	Title: Vice Chancellor for Legal Affairs
	Address:	-	Board of Regents of the Univ. System of GA
		-	270 Washington Street SW
		-	Atlanta, GA 30334
	Phone:	-	Phone: 404-962-3255
	email:	-	EM: Sam.Burch@usg.edu

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR B AE Systems Norfolk Ship Repair Inc.:
[Print name of Settling Defendant]

August 3, 2016
Dated

Anne M. Donohue
Name (print): Anne M. Donohue
Title: Deputy Chief Counsel & Asst Secretary
Address: 750 West Berkley Avenue
Norfolk, VA 23523

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Anne M. Donohue
Title: Deputy Chief Counsel & Asst. Secretary
Company: BAE Systems Norfolk Ship Repair Inc.
Address: 750 West Berkley Avenue
Norfolk, VA 23523
Phone: 757.402.6280
email: anne.donohue@baesystems.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Barnes & Powell Electrical Co., Inc.:
[Print name of Settling Defendant]

9/13/2016
Dated

James L Powell
Name (print):
Title: Vice President
Address: Po Box 849, 308 S. Parker Street
Elm City, NC 27822


Agent Authorized to Accept Service Name (print): _____
on Behalf of Above-signed Party: Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Bassett Furniture Industries, Inc.:
[Print name of Settling Defendant]

8/19/16

Dated


Name (print): J. Michael Daniel
Title: Senior Vice President & Chief Financial Officer
Address: 3525 Fairystone Park Hwy
Bassett, VA 24055

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Todd S. Roessler
Title: Attorney
Company: Kilpatrick Townsend
Address: 4208 Six Forks Rd, Ste 1400
Raleigh, NC 27609
Phone: 919-420-1726
email: troessler@kilpatricktownsend.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR BGE _____:
[Print name of Settling Defendant]

8/15/16
Dated

Carol Dodson
Name (print): Carol Dodson
Title: Vice President - Support Services
Address:

Agent Authorized to Accept Service Name (print): _____
on Behalf of Above-signed Party: Title: _____
Company: Corporate Creations Network
Address: 2 Wisconsin Circle, Suite 700
Cherry Chase MD 20815
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR BASF Corporation:
[Print name of Settling Defendant]

Dated

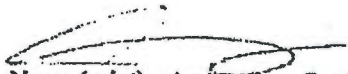
Linda Mirsky Brenneman
Name (print): Linda Mirsky Brenneman
Title: Associate General Counsel, Environmental
Address: 100 Park Avenue
Plorham Park, NJ 07932

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Karyllan Dodson Mack
Title: Environmental Counsel
Company: BASF Corp.
Address: 100 Park Ave
Plorham Park, NJ 07932
Phone: 973-245-7170
email: Karyllan.mack@basf.com

Signature Page for CD regarding the Ward Transformer Superfund Site

Bayer CropScience Inc
(Stauffer Management Company LLC as litigation agent for
FOR Bayer CropScience Inc
[Print name of Settling Defendant]

8/14/16
Dated


Name (print): Joe Yeager, Esq (McCarter & English LLP)
Title: Assistant Outside General Counsel to Stauffer Management Company
Address: 405 N. King Street, 8th Floor
Wilmington, DE 19801

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Charles N. Elmendorf
Title: Senior Director Environmental Remediation
Company: Stauffer Management Company LLC
Address: 1800 Concord Pike
Wilmington, DE 19850
Phone: (302) 885-7048
email: charles.elmendorf@astrazeneca.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Bedford Rural Electric Cooperative, Inc. :
[Print name of Settling Defendant]



8/16/2016

Dated


Name (print): Brooks R. Shoemaker
Title: General Manager
Address: P.O. Box 335
Bedford, PA 15522

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Joan W. Hartley
Title: Esquire
Company: Nexen Pruet, LLC
Address: 1230 Main St, Suite 700
Columbia, SC 29201
Phone: (803) 540-2129
email: jhartley@nexenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Town of Bedford, Virginia :
[Print name of Settling Defendant]

August 15, 2015
Dated


Name (print): Charles Kolakowski
Title: Town Manager
Address: 215 East Main Street
Bedford, VA 24523

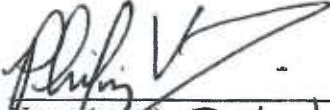
Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Charles Kolakowski
Title: Town Manager
Company: Town Of Bedford, Virginia
Address: 215 East Main Street
Bedford, VA 24523
Phone: (540) 587-6002
email: ckolakowski@bedfordva.gov

Reviewed by Town Attorney:
William W. Berry, IV
VA Bar No. : 09113
206 East Main Street
PO Box 526
Bedford, VA 24523
(540) 586-8133
Fax: (540) 586-8569
Email: wberry@bedfordva.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Town of Blackstone :
[Print name of Settling Defendant]

8/10/16
Dated


Name (print): Philip Vannoorbeeck
Title: Town Manager
Address: Town of Blackstone
100 W. Elm St. Blackstone, Va. 23824

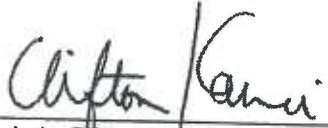
Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): William D. Coleburn
Title: Mayor
Company: Town of Blackstone
Address: 160 W. Elm St. Blackstone VA 23824
Phone: 434-292-3019 work
email: mayorbilly@courier-record.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Brazos Electric Power Cooperative, Inc. :
[Print name of Settling Defendant]

7/27/16
Dated


Name (print): Clifton Karnei
Title: Executive Vice President & General Manager
Address: 7616 Bagby Ave., Waco, TX 76712


Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Clifton Karnei
Title: Exec. Vice Pres. & General Manager
Company: Brazos Electric Power Cooperative, Inc.
Address: 7616 Bagby Ave., Waco, TX 76712
Phone: (254) 750-6500
email: ckarnei@brazoselectric.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Buist Electric :
[Print name of Settling Defendant]

8/2/16
Dated


Name (print): Brent Brinks
Title: Vice President
Address: 8650 Byron Center Ave
Byron Center, MI 49315

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Steve Longstreet
Title: President
Company: Buist Electric
Address: 8650 Byron Center Ave

Phone: 616 8781375
email: SLONGSTREET@BUISTELECTRIC.COM



Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Cape Hatteras Electric Membership Corporation
[Print name of Settling Defendant]

8/12/16
Dated

Susan E. Flythe
Name (print): Susan E. Flythe
Title: EVP & General Manager
Address: PO Box 9
Buxton, NC 27920

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Patrick A. Genzler
Title: Legal Counsel
Company: Vandeventer Black LLP
Address: 500 World Trade Center
Norfolk, VA 23510
Phone: 757-446-8631
email: pgenzler@vanblk.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Cargill, Inc. :
[Print name of Settling Defendant]

August 2, 2016
Dated


Anne Monine
Name (print): Anne Monine
Title: Corporate Environmental Lead
Address: 15407 McGinty Rd W
MS-56-1-9380
Wayzata, MN 55391

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Anne Monine
Title: Corporate Environmental Lead
Company: Cargill, Inc.
Address: 15407 McGinty Rd W
MS-56-1-9380
Phone: Wayzata, MN 55391
email: 952-742-2969
anne-monine@cargill.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Carlisle Construction Materials, LLC :
[Print name of Settling Defendant]
f/k/a Carlisle Syntec Incorporated

8/24/16
Dated

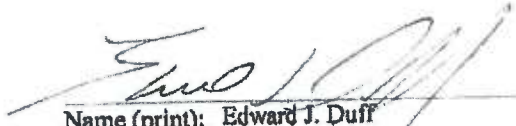

Name (print): John D. Waclawski
Title: VP + General Counsel
Address: 1285 Ritner Highway
Carlisle, PA 17013

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): John D. Waclawski
Title: VP and General Counsel
Company: Carlisle Construction Materials, LLC
Address: 1285 Ritner Highway
Carlisle, PA 17013
Phone: 717-245-7151
email: john.waclawski@carlislecm.com

Signature Page for CD regarding the Ward Transformer Superfund Site

Carr & Duff, Inc., for itself and on behalf of
Ed Duff
FOR _____ :
[Print name of Settling Defendant]

9/17/16
Dated


Name (print): Edward J. Duff
Title: Vice President
Address: 2100 Byberry Road
Huntingdon Valley, PA 19006

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	Mason Avrigian, Jr./Jeffrey P. Wallack
	Title:	Attorneys for Carr & Duff, Inc.
	Company:	Wisler Pearlstine, LLP
	Address:	460 Norristown Road, Suite 110
		Blue Bell, PA 19422
	Phone:	610-825-8400
email:	mavrigian@wispearl.com/jwallack@wispearl.com	

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Caterpillar Inc. :
[Print name of Settling Defendant]

AUGUST 8, 2016

Dated



Name (print): Rick Moore
Title: Facility Manager
Address: 27th and Pershing Road
Decatur, IL 62525

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Charles Anthony
Title: Environmental Attorney
Company: Caterpillar Inc.
Address: 100 NE Adams St.
Peoria, IL 61629
Phone: (309) 675-5257
email: anthony_charles_r@cat.com

Signature Page for CD regarding the Ward Transformer Superfund Site

**FOR CEMEX CONSTRUCTION MATERIALS
FLORIDA, LLC**

8/17/16

Dated

MF Egan

Name (print): Mike F. Egan

Title: EVP & GC

Address: 1501 Belvedere Road
West Palm Beach, FL 33406

Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): Corporate Creations

Title: Agent for Service

Company: Corporate Creations Network, Inc.

Address: 11380 Prosperity Farms Rd., #221E
Palm Beach Gardens, FL 33410

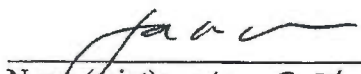
Phone: (561) 694-8107

email: contactus@corpcreations.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR C6X Energy LLC :
[Print name of Settling Defendant]

August 8, 2016
Dated


Name (print): John R. Thomas
Title: Assistant General Counsel
Address: 200 West Street
New York, NY 10022-2198

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Megan R. Brillault</u>
	Title:	<u>Attorney</u>
	Company:	<u>Beveridge & Diamond, P.C.</u>
	Address:	<u>477 Madison Avenue, 15th Floor</u>
		<u>New York, NY 10022</u>
	Phone:	<u>212-702-5414</u>
email:	<u>mbrillault@bdlaw.com</u>	

Signature Page for CD regarding the Ward Transformer Superfund Site

Lloyd Ballard Mauldin FOR Chemical Products Corporation
[Print name of Settling Defendant]

7/25/2016
Dated

Lloyd Ballard Mauldin
Name (print):
Title: President
Address: P.O. Box 2470
Cartersville, GA 30120

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Lloyd Ballard Mauldin
Title: President & Registered Agent
Company: Chemical Products Corporation
Address: P.O. Box 2470
Cartersville, GA 30120
Phone: (770) 382-2144
email: B.Mauldin@CPCL.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Chevron Mining Inc.
[Print name of Settling Defendant]

8/2/16
Dated

Robert R. John
Name (print): Robert R. John
Title: President
Address: 6001 Bollinger Canyon Road
San Ramon, CA 94583-2324

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Corporation Service Company (CSC)
Title:
Company:
Address: 2710 Gateway Oaks Dr. Suite 150 N
Sacramento, CA 95833
Phone: 1-800-222-2122
email: SOP@CSCglobal.com

Signature Page for CD regarding the Ward Transformer Superfund Site

CHRISTUS Health Northern Louisiana
FOR d/b/a CHRISTUS Schumpert :
[Print name of Settling Defendant]

8-16-16
Dated

Andy Navarro
Andy G. Navarro
Name (print):
Title: Vice President / Regional General Counsel
Address: 919 Hidden Ridge
Irving, TX 75038

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Nancy Le Gros
Title: Sr. V.P. / Chief Legal Counsel
Company: CHRISTUS Health
Address: 919 Hidden Ridge
Irving, TX 75038
Phone: (469) 282-2354
email: nancy.legros@christushealth.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Cleveland Electric Company
[Print name of Settling Defendant]

August 2016
Dated


Name (print): Ken Harbour
Title: Vice President
Address: 1281 Fulton Industrial Boulevard
Atlanta, Georgia 30336

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Herman L. Fussell</u>
	Title:	<u>Attorney</u>
	Company:	<u>Hudson Parrott Walker, LLC</u>
	Address:	<u>3575 Piedmont Rd. NE, Bldg 15, Ste. L100</u>
		<u>Atlanta, Georgia 30305</u>
	Phone:	<u>404.781.0565</u>
	email:	<u>hfussell@hpwlegal.com</u>

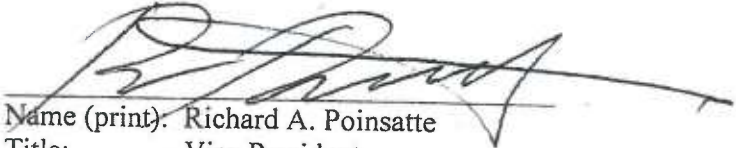
NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Cohen & Green Salvage Company, Inc.

1 August 2016

Dated



Name (print): Richard A. Poinatte
Title: Vice President
Address: 7575 West Jefferson Blvd.
Fort Wayne, IN 46804

Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): David R. Steiner
Title: Attorney for Cohen & Green Salvage
Company, Inc.
Company: Barrett McNagny LLP
Address: 215 East Berry Street
Fort Wayne, IN 46802
Phone: (260) 423-8915
email: drs@barrettlaw.com

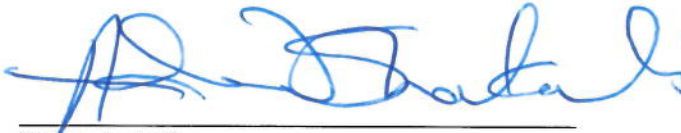
1654407

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Conopco Inc. f/k/a Unilever
[Print name of Settling Defendant]

8/30/2016

Dated



Name (print):

Andrew Shakalis

Title:

Associate General Counsel-

Address:

Environmental & Safety
as in-house counsel, acting
on behalf of Conopco, Inc.

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print):

Andrew Shakalis

Title:

Associate General Counsel

Company:

Conopco, Inc.

Address:

800 Sylvan Avenue, A-1024
Englewood Cliffs NJ 07634

Phone:

201.894.2763

email:


andrew.shakalis@unilever.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Consolidation Coal Company
[Print name of Settling Defendant]

8/2/16
Dated


Name (print): Jason D. Witt
Title: SECRETARY
Address: 46226 NATIONAL RD.
ST. CLAIRSVILLE, OH 43950

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Jason D. Witt
Title: Secretary
Company: Consolidation Coal Company
Address: 46226 National Rd.
St. Clairsville, Ohio 43950
Phone: 740-338-3352
email: jwitt@coalsource.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Continental Grain Company :
[Print name of Settling Defendant]



August 10, 2016

Dated

Name (print): Frank W. Baier
Title: Executive Vice President - Chief Financial Officer
Address: 767 Fifth Avenue, 15th Floor
New York NY 10153

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Michael R. Mayberry
Title: Senior Vice President - Legal
Company: Continental Grain Company
Address: 767 Fifth Avenue, 15th Fl.
New York NY 10153
Phone: 212-267-2878
email: michael.mayberry@conti.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR

COOPER TIRE & RUBBER COMPANY

7/27/2016
Dated


Name: Thomas N. Lause

Title: VP and Treasurer

Address: 701 Lima Avenue, Findlay, Ohio 45840

Approved as to Legal
Form JSW

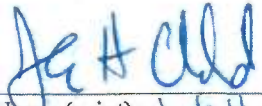
Agent Authorized to Accept Service Name (print):
on Behalf of Above-signed Party:

Title: Amy McLaren
Company: CT Corporation
Address: 1300 E. 9th Street
Cleveland, Ohio 44114
Phone: 216-802-2121

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Corning Incorporated, formerly known as Corning Glass Works :
[Print name of Settling Defendant]

August 17, 2016
Dated

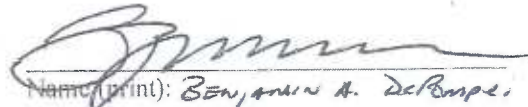

Name (print): Jack H. Cleland
Title: Senior Vice-President
Address: Corning Incorporated
One Riverfront Plaza
Corning, NY 14831

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Linda E. Jolly
Title: Vice President and Corporate Secretary
Company: Corning Incorporated
Address: One Riverfront Plaza
Corning, NY 14831
Phone: 607-974-7430
email: jollyl2@corning.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Dacco, Inc. _____;
[Print name of Settling Defendant]

8.16.16
Dated


Name (print): BENJAMIN A. DeRonde
Title: CEO, EVP
Address: 7350 Young Dr
Wickliffe, OH 44146

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Corporation Service Company
Title: Registered Agent
Company: _____
Address: 50 W. Broad St., Suite 1800
Columbus, OH 43215
Phone: 1-866-403-5272
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR DELAWARE ELECTRIC COOPERATIVE, INC.
[Print name of Settling Defendant]

8/8/2016

Dated

J. William Andrew

Name (print): J. WILLIAM ANDREW

Title: PRESIDENT & CEO

Address: PO BOX 600
GREENWOOD, DE 19950

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): BRUCE CAMPBELL

Title: MANAGER OF COLLECTIONS

Company: DELAWARE ELECTRIC COOPERATIVE INC

Address: PO BOX 600

GREENWOOD DE 19950

Phone: 302-349-3159

email: BCAMPBELL@DECOOP.COM

Signature Page for CD regarding the Ward Transformer Superfund Site

DONORAN Spring & Equipment Co. Inc.

FOR

[Signature]
[Print name of Settling Defendant]

8/16/16
Dated

JOHN CHAKMAKAS

Name (print):

Title: VP+TREAS

Address: 6 ENTERPRISE DR

LOWDOVERAY NH 03053

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Michael J. Quinn

Title: Attorney

Company: McLane Middleton

Address: 100 Arboretum Drive

Newington, NH 03801

Phone: (603) 436-2818

email: Mike.Quinn@McLane.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR City of Dover :
[Print name of Settling Defendant]

8/23/2016
Dated

William W. Pappas
Name (print) William W. Pappas
Title: Deputy City Solicitor
Address: 414 S. State Street
Dover, DE 19901

Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): Nicholas H. Rodriguez, Esq.
Title: City Solicitor
Company: _____
Address: 414 S. State Street
Dover, DE 19901
Phone: (302) 674-0140
email: nrodriguez@schmittrod.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Dravo Corp. :
[Print name of Settling Defendant]

August 11, 2016
Dated

[Signature]
Name (print): Kevin White
Title: Vice President and General Counsel
Address: Carmeuse Lime & Stone
11 Stanwix St., 21st Floor
Pittsburgh PA 15222

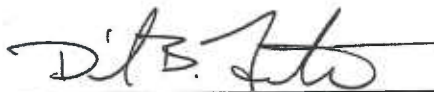
Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Joseph Frankenberg
Title: Environmental Counsel
Company: Carmeuse Lime & Stone
Address: 11 Stanwix St., 21st Floor
Pittsburgh PA 15222
Phone: 412.995.1054
email: joseph.frankenberg@carmeuseinc.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Duke Energy Progress, LLC:
[Print name of Settling Defendant]

8-10-2016

Dated



Name (print): David B. Fountain
Title: President, North Carolina
Address: 410 S. Wilmington Street
Raleigh, NC 27601

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

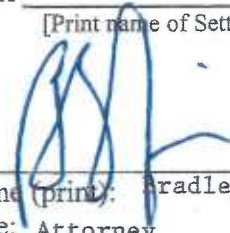
Name (print): Ariane S. Johnson, Esq.
Title: Associate General Counsel
Company: Duke Energy
Address: 1000 E. Main Street
Plainfield, IN 46168
Phone: (317) 838-1035
email: ariane.johnson@duke-energy.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Duquesne Light Company :
[Print name of Settling Defendant]

08/12/16

Dated _____


Name (print): Bradley S. Tupi
Title: Attorney
Address: 1500 One PPG Place
Pittsburgh, PA 15222

Agent Authorized to Accept Service	Name (print):	<u>Bradley S. Tupi</u>
on Behalf of Above-signed Party:	Title:	<u>Attorney</u>
	Company:	<u>Tucker Arensberg, P.C.</u>
	Address:	<u>1500 One PPG Place</u>
		<u>Pittsburgh, PA 15222</u>
	Phone:	<u>(412) 594-5545</u>
	email:	<u>btupi@tuckerlaw.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR East Central Regional Hospital
[Print name of Settling Defendant]

8/19/16
Dated


Paul M. Brock
Name (print): Paul Brock
Title: Regional Hospital Administrator
Address: 100 Myrtle Blvd.
Gracewood, GA 30812

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Graham L. Barron, Esq.
Title: Assistant Attorney General
Company: Georgia Department of Law
Address: 40 Capitol Square, SW
Atlanta, GA 30334-1300
Phone: (404) 656-7541
email: gbarron@law.ga.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR East Kentucky Power Cooperative
[Print name of Settling Defendant]

08-01-2016
Dated


Name (print): ANTHONY S. Campbell
Title: President & CEO
Address: P.O. Box 707
Winchester, KY 40392-0707

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): ANTHONY S. Campbell
Title: President & CEO
Company: East Kentucky Power Cooperative
Address: P.O. Box 707
Winchester KY 40392-0707
Phone: 859-745-9314
email: tony.campbell@ekpc.coop

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR East Penn Manufacturing Co.
[Print name of Settling Defendant]

1/25/16
Dated

Christina L. Weeber
Name (print):
Title: Senior VP-Finance/Secretary
Address: 102 DeKa Road
Lyon Station, PA 19536

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Cooper Power Systems, LLC ;
[Print name of Settling Defendant]

9/7/16
Dated


Name (print): Heath B. Monesmith
Title: Senior Vice President and Deputy General Counsel
Address: Eaton
1000 Eaton Boulevard
Cleveland, OH 44122


Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Rita Palmer
Title: _____
Company: CT Corporation
Address: 1300 Superior Ave.
Cleveland, OH 44114
Phone: 216 802 2103
email: rita.palmer@WolterSkluwer.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR E. I. du Pont and Company :
[Print name of Settling Defendant]

Aug 9, 2016
Dated


Name (print): Michael J. Lukas
Title: Remediation Team Manager
Address:

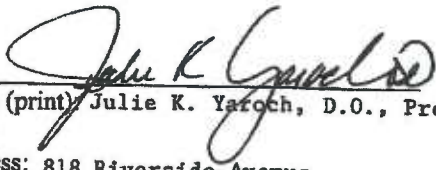
Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print): <u>PATRICIA MCGEE, Esq.</u>
	Title: <u>CORPORATE COUNSEL</u>
	Company: <u>E. I. du Pont de Nemours and Company</u>
	Address: <u>974 CENTRE ROAD</u>
	<u>WILMINGTON DE 19805</u>
	Phone: <u>302-986-8275</u>
	email: <u>PATRICIA.MCGEE@DUPONT.COM</u>

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Emma L. Bixby Medical Center dba
ProMedica Bixby Hospital :
[Print name of Settling Defendant]

7-28-16
Dated



Name (print): Julie K. Yatch, D.O., President
Title:
Address: 818 Riverside Avenue
Adrian, MI 49221

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Jeffrey C. Kuhn
Title: Chief Legal Officer/General Counsel
Company: ProMedica Health System
Address: 1801 Richards Road
Toledo, OH 43607
Phone: (419) 469-3622
email: jeff.kuhn@promedica.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Endicott Clay Products Company:
[Print name of Settling Defendant]

August 15, 2016
Dated

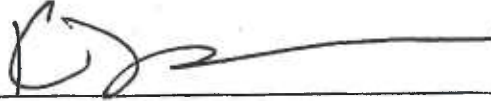

Name (print): Ryan L. Parker
Title: President & CEO
Address: P.O. Box 17
Fairbury, NE 68352

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Ryan L. Parker
Title: President & CEO
Company: Endicott Clay Products Company
Address: P.O. Box 17
Fairbury, NE 68352
Phone: 402-729-3315
email: rparker@endicott.com

Electing to be a Cashout Party. ~~7/28~~ 8/15/16

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Entergy Arkansas, Inc. f/k/a Arkansas Power and Light, Inc. :
[Print name of Settling Defendant]



8/12/16
Dated

Name (print): Kelly McQueen
Title: Assistant General Counsel
Address: 425 West Capitol Ave., Little
Rock, AR 72201

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Kelly McQueen
Title: Assistant General Counsel
Company: Entergy Services, Inc. (signing as Agent for EAI)
Address: 425 West Capitol Ave. Little Rock,
AR 72201
Phone: 501-377-5760
email: kmcque1@entergy.com

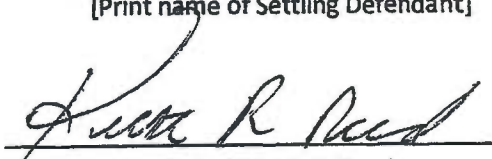
Signature Page for CD regarding the Ward Transformer Superfund Site

FOR ENVIRONMENTAL PROTECTION SERVICES, INC. :

[Print name of Settling Defendant]

August 19, 2016

Dated



Name (print): Keith R. Reed

Title: President

Address: 4 Industrial Park Dr.

Wheeling, WV, 26003

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Edward L. Kropp

Title: Counsel

Company: Steptoe & Johnson, PLLC

Address: P.O. Box 36425

Indianapolis, IN, 36426


Phone: (317) 946-9882

email: Skipp.Kropp@steptoe-johnson.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR ERACHEM COMILOG INC. :
[Print name of Settling Defendant]

Dated _____

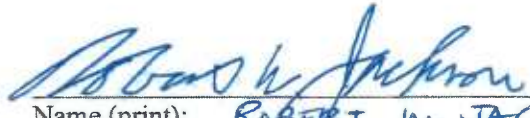

Name (print): Michael E. Manley
Title: CEO
Address: 610 Pittman Rd
Baltimore, MD 21226

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>John Lazzaretti</u>
	Title:	<u>Senior Associate</u>
	Company:	<u>Squire Patton Boggs (US) LLP</u>
	Address:	<u>4900 Key Tower 127 Public Square</u>
		<u>Cleveland, OH 44114</u>
	Phone:	<u>216.479.8350</u>
	email:	<u>john.lazzaretti@squirepb.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR EXXONMOBIL OIL CORPORATION
[Print name of Settling Defendant]

16 Aug 16
Dated


Name (print): ROBERT W. JACKMORE
Title: US/AMERICAS SOUTH
Address: COMMERCIAL MGR.
22777 SPRINGWOODS VILLAGE PARKWAY
52.2B.282, SPRING TX 77389

Agent Authorized to Accept Service Company
on Behalf of Above-signed Party: NAME (print): CORPORATION SERVICE COMPANY
Title: _____
Company: _____
Address: 327 MILLSBOROUGH STREET
RALEIGH, NC 27603-1725
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Fabri-Kal Corporation :
[Print name of Settling Defendant]

8/4/2016
Dated

Gary C. Galia
Name (print): Gary C. Galia
Title: EVP – Finance/CFO
Address: 600 Plastics Place,
Kalamazoo, Michigan 49001

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Firelands Electric Cooperative, Inc.
[Print name of Settling Defendant]

7/26/16

Dated



Name (print): Daniel McNaull
Title: President
Address: 1 Energy Place
New London, Ohio 44851

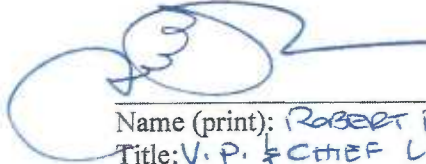
Agent Authorized to Accept Service
on behalf of Above-signed Party:

Name (print): April Bordas
Title: General Manager
Company: Firelands Electric Cooperative, Inc.
Address: 1 Energy Place
New London, Ohio 44851
Phone: 419/929-1571
Email: abordas@firelandsec.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR FLORIDA POWER & LIGHT COMPANY / NEXTERA
[Print name of Settling Defendant]

8/01/16
Dated



Name (print): ROBERT B. SANDLER
Title: V.P. & CHIEF LITIGATION COUNSEL
Address: 700 UNIVERSE BLVD.
JUNO BEACH, FL.
33408

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): ROBERT B. SANDLER
Title: V.P. & CHIEF LITIGATION COUNSEL
Company: FPL / NEXTERA ENERGY
Address: 700 UNIVERSE BLVD.
JUNO BEACH, FL. 33408
Phone: 561-691-7109
email: robert.b.sandler@nee.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR :

August 3, 2016

Name (print): Douglas L. Frame
Company: FluiDyne Engineering Corp.
dba Phoenix Solutions Co
Title: President
Address: 5480 Nathan Lane N,
Suite 110
Plymouth, MN 55442

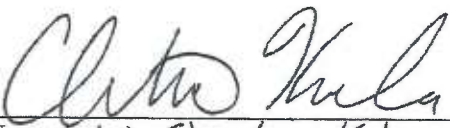
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Douglas L. Frame
Title: President
Company: FluiDyne Engineering Corp.
.dba Phoenix Solutions Co
Address: 5480 Nathan Lane N,
Suite 110,
Plymouth, MN 55442
Phone: 763-544-2721
email: dframe@phoenixsolutionsco.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR FMC Corporation :
[Print name of Settling Defendant]

8/3/16
Dated



Name (print): Christina Kaba
Title: Director, EHS Remediation & Governance
Address: FMC Corporation
2929 Walnut St.
Philadelphia, PA 19104

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): John F. Stillman
Title: Assistant General Counsel
Company: FMC Corporation
Address: 2929 Walnut St.
Philadelphia, PA 19104
Phone: (215) 299-6989
email: john.stillman@fmc.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Four County Electric Membership Corporation :
[Print name of Settling Defendant]

August 3, 2016
Dated


Name (print): Mitchell L. Keel
Title: CEO
Address: 1822 NC Hwy 53 W, Burgaw NC 28425

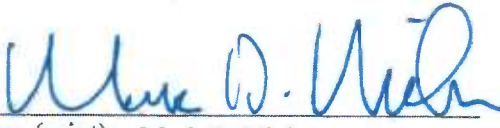
Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Mitchell L. Keel
Title: CEO
Company: Four County Electric Membership Corporation
Address: 1822 NC Hwy 53 W
Burgaw, NC 28425
Phone: (910) 259-1825
email: mkeel@fourcty.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Frontier Communications Corp. :
[Print name of Settling Defendant]

7/26/16

Dated


Name (print): Mark D. Nielsen
Title: EVP, General Counsel
Address: 401 Merritt 7, Norwalk, CT 06851

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): John S. Hahn
Title: Partner
Company: Mayer Brown LLP
Address: 1999 K Street N.W.
Washington D.C. 20006-1101
Phone: 202-263-3346
email: jhahn@mayerbrown.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Furman University :
[Print name of Settling Defendant]

8/12/16
Dated

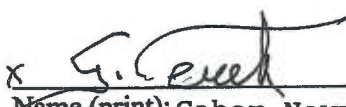
Angela Littlejohn
Name (print): Angela Littlejohn
Title: General Counsel
Address: 3300 Poinsett Hwy
Greenville, South Carolina

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR G&S Motor Equipment Co., INC. :
[Print name of Settling Defendant]

7/26/16
Dated


x 
Name (print): Gabor Newmark
Title: President
Address: 1800 Harrison Ave.
Kearny, NJ 07032

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	Jeffrey B. Wagenbach, Esq.
	Title:	
	Company:	Riker Danzig Scherer Hyland & Perretti LLP
	Address:	Headquarters Plaza, One Speedwell Ave.
		Morristown, New Jersey 07962-1981
	Phone:	973-451-8524
	email:	jwagenbach@riker.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR General Electric Co. :
[Print name of Settling Defendant]

5 Aug 2016
Dated



Name (print): Randall McAlister
Title: Exec. Mgr., Environmental Remediation
Address: 3135 Easton Tpk.
Fairfield CT 06628

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Kirk Macfarlane
Title: Executive Counsel
Company: General Electric Company
Address: 640 Freedom Business Center
King of Prussia, PA 19406
Phone: 610 992 7976
email: kirk.macfarlane@ge.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR General Extrusions, Inc. :
[Print name of Settling Defendant]

7/29/2016
Dated

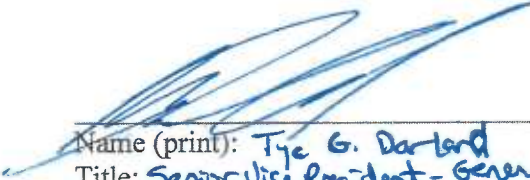

Name (print): Herbert F. Schuler, Jr.
Title: President
Address: PO Box 3488, Youngstown, OH 44513-3488

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Herbert F. Schuler, Jr.
Title: President
Company: General Extrusions, Inc.
Address: PO Box 3488
Youngstown, OH 44513-3488
Phone: 330-783-0270
email: hfschulerjr@genext.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Georgia Pacific LLC :
[Print name of Settling Defendant]

8/1/16
Dated


Name (print): Tye G. Darland
Title: Senior Vice President - General Counsel and Secretary
Address: 133 Peachtree Street, NE
Atlanta, GA 30303

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): John Bottini
Title: Senior Counsel
Company: Georgia-Pacific LLC
Address: 133 Peachtree St N.E.
Atlanta, Georgia 30303
Phone: 404-652-4803
email: john.bottini@gapac.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR GEP-TRC, LLC (f/k/a The Rouse Company, LLC),
a Delaware limited liability company:
[Print name of Settling Defendant]

8-11-16
Dated

Rosemary B. Feit
Name (print): Rosemary B. Feit
Title: Assistant Secretary
Address: c/o General Growth Properties
110 N. Wacker Drive
Chicago, IL 60606

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR GrafTech International Holdings Inc. f/k/a UCAR Carbon Company Inc. :
[Print name of Settling Defendant]



08/05/2016
Dated

LIONEL D BATT

Name (print):

Title: PRESIDENT ENVIRONMENTAL SOLUTIONS, GRAFTECH

Address: INTERNATIONAL
6100 OAK TREE BLVD
INDEPENDENCE, OHIO 44131

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print):

Title:

Company:

Address:

Phone:

email:

-

-

CT Corporation

1209 Orange Street

Wilmington, DE 19801

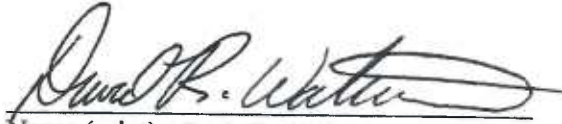
-

-

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Grand Haven Board of Light and Power :
[Print name of Settling Defendant]

August 8, 2016
Dated



Name (print): David R. Walters
Title: General Manager
Address: 1700 Eaton Drive
Grand Haven, MI 49417

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Timothy J. Lundgren
Title: Partner
Company: Varnum LLP
Address: 333 Bridge Street NW
Grand Rapids, MI 49504
Phone: (616) 336-6750
email: tjlundgren@varnumlaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR GREEN CIRCLE GROWERS, INC :
[Print name of Settling Defendant]

8-8-16
Dated


Tony Lucarell
Name (print): TONY LUCARELL
Title: CFO
Address: 51051 US HWY 20, OBERLIN, OH 44074

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Amanda M. Knapp, Esq.
Title: Attorney
Company: Roetzheim & Associates LPA
Address: 1375 East Ninth Street
One Cleveland Center, 10th Fl, Cleveland OH
Phone: (216) 623-0150 44114
email: aknapp@ralaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Green Mountain Power, Inc. :
[Print name of Settling Defendant]

17 Aug 16
Dated



Name (print): Charlotte Ancel
Title: Vice President, General Counsel, Generation & Power Resources
Address: 1252 Post Road
Rutland, VT 05701

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Debra L. Bouffard</u>
	Title:	<u>Esquire</u>
	Company:	<u>Sheehey Furlong & Behm, P.C.</u>
	Address:	<u>30 Main Street, 6th Floor - PO Box 66</u>
		<u>Burlington, VT 05402-0066</u>
	Phone:	<u>(802) 864-9891</u>
	email:	<u>dbouffard@sheeheyvt.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Greenwood Mills Inc.
[Print name of Settling Defendant]

8-1-2016
Dated

William B. Watkins
Name (print): William B. Watkins
Title: Vice President
Address: P.O. Box 1546
Greenwood, S.C. 29648

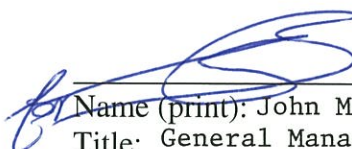
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Joan Wash Hartley
Title: Special Counsel
Company: Nelsen Pruet, LLC
Address: 1230 Main St. Ste 700
Columbia SC 29201
Phone: 803-540-2129
email: jhartley@nelsenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR GUAM POWER AUTHORITY _____:
[Print name of Settling Defendant]

8/1/16
Dated



Name (print): John M. Benavente, P.E.
Title: General Manager
Address: Guam Power Authority
P.O. Box 2977
Hagatna, Guam 96932-2977

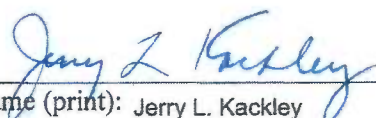
Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>D. Graham Botha, Esq.</u>
	Title:	<u>General Counsel</u>
	Company:	<u>Guam Power Authority</u>
	Address:	<u>P.O. Box 2977</u>
		<u>Hagatna, Guam 96932-2977</u>
	Phone:	<u>(671) 648-3203/3002</u>
	email:	<u>gbotha@gpagwa.com</u>

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Guernsey-Muskingum Electric Cooperative, Inc. :
[Print name of Settling Defendant]

8/18/2016
Dated


Name (print): Jerry L. Kackley
Title: General Manager/CEO
Address: 17 South Liberty Street
New Concord, OH 43762

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Trischa Snyder Chapman</u>
	Title:	<u>Legal Counsel</u>
	Company:	<u>BakerHostetler</u>
	Address:	<u>65 E. State Street, Suite 2100</u>
		<u>Columbus, OH 43215</u>
	Phone:	<u>614-462-2663</u>
	email:	<u>tchapman@bakerlaw.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR

Scott B. Haines
[Print name of Settling Defendant]
Scott B. Haines
for H+K Group, Inc.

8/8/16
Dated

Name (print):

Title: President

Address: 2052 Lucon Rd.
Skippack, PA 19474

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Paul R. Ober, Esq.

Title: Attorney

Company: Paul Ober + Associates

Address: 234 N. 6th St.
Reading, PA 19601

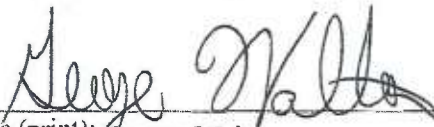
Phone: 610-378-0121

email: paul@oberandassociates.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Hancock Wood Electric Cooperative, Inc. :
[Print name of Settling Defendant]

7/26/16
Dated


Name (print): George Walton
Title: President & CEO
Address: 1399 Business Park Drive South
North Baltimore, OH 45872

Agent Authorized to Accept Service	Name (print):	<u>George Walton</u>
on Behalf of Above-signed Party:	Title:	<u>President & CEO</u>
	Company:	<u>Hancock Wood Electric Cooperative, Inc.</u>
	Address:	<u>1399 Business Park Drive South</u>
		<u>North Baltimore, OH 45872</u>
	Phone:	<u>419-423-4841</u>
	email:	<u>george@hwe.coop</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Harsco Corporation :
[Print name of Settling Defendant]

2/16/16
Dated

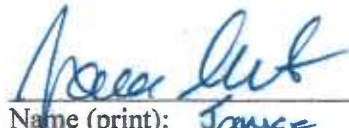
Sam Roman
Name (print): Samuel Romaninsky
Title: Assistant General Counsel, Global Litigation and
Address: Harsco Corporation Dispute Resolution
350 Poplar Church Road
Camp Hill, PA 17011

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Samuel Romaninsky
Title: Assistant General Counsel, G.L.D.R.
Company: Harsco Corporation
Address: 350 Poplar Church Road
Camp Hill, PA 17011
Phone: 717-730-1950
email: Sromaninsky@harsco.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Haynes International, Inc.
[Print name of Settling Defendant]

July 27, 2016
Dated


Name (print): Janice Grunst
Title: VP- General Counsel
Address: 1020 W. Park Ave.
Kokomo, IN 46904

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Janice Grunst
Title: VP- General Counsel
Company: Haynes International, Inc.
Address: 1020 W. Park Ave
Kokomo, IN 46904
Phone: (765) 456-6110
email: jgrunst@haynesintl.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR  Hercules Incorporated
[Print name of Settling Defendant]

08/19/16
Dated

Name (print): Robin E. Lampkin
Title: Senior Environmental Product Regulatory
Address: 5200 Blazer Parkway & Trade Group
Dublin, OH 43017 Counsel

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Robin E. Lampkin
Title: /
Company: Hercules Incorporated
Address: 5200 Blazer Parkway
Dublin, OH 43017
Phone: 614.790.3019
email: relampkin@hland.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The Hershey Company _____ :
[Print name of Settling Defendant]

August 18, 2016

Dated



Name (print): Kathleen S. Purcell

Title: Assistant Corporate Secretary


Address: 100 Crystal A Drive, Hershey, PA 17033

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Craig P. Wilson</u>
	Title:	<u>Partner</u>
	Company:	<u>K&L Gates LLP</u>
	Address:	<u>17 North Second Street, 18th Floor</u> <u>Harrisburg, Pennsylvania 17101-1507</u>
	Phone:	<u>(717) 231-4509</u>
	Email:	<u>craig.wilson@klgates.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The Hillshire Brands Company, f/k/a Sara Lee Corporation,
including all present and former subsidiaries and affiliates thereof :
[Print name of Settling Defendant]

8-1-2016
Dated



Name (print): Kevin J. Igli
Title: Senior Vice President
Address: 2200 Don Tyson Parkway
Springdale, AR 72762

Agent Authorized to Accept Service Name (print): Tyson Foods, Inc.
on Behalf of Above-signed Party: Title: N/A
Company: c/o CT Corporation
Address: 124 West Capitol Avenue, Suite 1900
Little Rock, AR 72201-3736
Phone: 202-572-3133
Email: N/A

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR HOLLADAY PROPERTY SERVICE MIDDLESEX, INC.
[Print name of Settling Defendant]

8/16/15
Dated

TIMOTHY A. BAKER T. A. B.
Name (print):
Title: SR. V.P. & PARTNER
Address: 227 SO. MAIN ST., SOUTH BEND, IN
46601


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): TIMOTHY A. BAKER
Title: SR. V.P. & PARTNER
Company: HOLLADAY PROPERTIES
Address: 227 SO. MAIN ST., SO. BEND, IN
46601
Phone: 574-217-4678
email: TBAKER@HOLLADAYPROPERTIES.COM

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Honeywell :
[Print name of Settling Defendant]

Dated _____


Name (print): John J. Morris
Title: Global Remediation Dir
Address: 115 Taber Rd
Morris Plains, NJ

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____

Title: _____

Company: _____

Address: _____

Phone: _____

email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR HUDSON LIGHT & POWER DEPT. :
[Print name of Settling Defendant]

8/10/16
Dated


Brian R Choquette
Name (print): BRIAN R. CHOQUETTE
Title: GENERAL MANAGER
Address: 49 FOREST AVE, HUDSON MA 01749

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Brian R. Choquette
Title: General Manager
Company: Hudson Light & Power Department
Address: 49 Forest Avenue
Hudson, MA 01749
Phone: 978-568-8736
email: bchoquette@hudsonlight.com

Signature Page for CD regarding the Ward Transformer Superfund Site

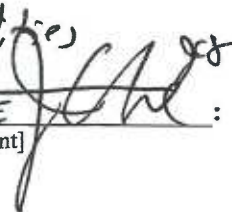
FOR Huntington Ingalls Incorporated :
[Print name of Settling Defendant]

8/17/16
Dated



Name (print):
Title: **Thomas Stiehle**
Address: **VP Business Management
& CFO**

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print):
Title: Registered Agent for Service of Process
Company: C T Corporation System
Address: 645 Lakeland East Drive, Suite 101
Flowood, Mississippi 39232
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

Huntsville Utilities
FOR JAY C. STOWE :
[Print name of Settling Defendant]

8.16.16
Dated



Name (print): JAY C STOWE
Title: PRESIDENT & CEO
Address: PO Box 2084
Huntsville, AL 35804

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Warne S. Heath
Title: Attorney
Company: Bradley Arant Boult Cummings LLP
Address: 200 Clinton Ave. W, Suite 900
Huntsville, AL 35801
Phone: 256-517-5100
email: wheath@bradley.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR IES Commercial, Inc. :
[Print name of Settling Defendant]

8/1/16
Dated


Name (print): Sarah Kemper
Title: VP, Asst. Secretary
Address: 5433 Westheimer, Ste 500
Houston, TX 77056

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Joan Wash Hartley
Title: Special Counsel
Company: Nexsen Pruet, LLC
Address: 1230 Main St., Ste. 700
Columbia Sc, 29201
Phone: 803-540-2129
email: jhartley@nexsenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Imerys Carbonates USA, Inc. :
[Print name of Settling Defendant]

8/4/2016
Dated


Cindy A. Hein
Name (print): Cindy A. Hein
Title: Treasurer
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Doug Arnold
Title: Partner
Company: Alston Bird LLP
Address: 1201 West Peachtree St.
Atlanta, GA 30309
Phone: (404) 881 7000
email: doug.arnold@alston.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Travis Fusal Minerals Greenville, Inc.
[Print name of Settling Defendant]

7/28/16
Dated


Name (print): Tim Newton
Title: C.O.O.
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR International Paper Co.:
[Print name of Settling Defendant]

8/11/16
Dated


Brian E. Heim
Name (print): Brian E. Heim
Title: Chief Counsel
Address: 6400 Poplar Ave
Memphis, TN 38197

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Brian E. Heim
Title: Chief Counsel
Company: International Paper
Address: 6400 Poplar Ave
Memphis, TN 38197
Phone: 901-419-3824
email: brian.heim@ipaper.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Intertape Polymer Group Inc. :
[Print name of Settling Defendant]

8/16/16
Dated



Name (print): Shawn Nelson
Title: Senior VP, Sales
Address: 100 Paramount Dr. Suite 300
Sarasota FL 34232

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Randi M. Booth
Title: Vice-President & General Counsel
Company: Intertape Polymer Group Inc.
Address: 100 Paramount Dr. Suite 300
Sarasota FL 34232
Phone: 941. 739. 7521
email: rbooth@itape.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR J.C. Blair Memorial Hospital
[Print name of Settling Defendant]

7/26/16
Dated


Name (print): Jason F. Hawker
Title: CEO
Address: 1229 Warm Springs Ave
Huntingdon, PA 16652

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Marlene Pierce
Title: V.P. of Quality Improvement
Company: J.C. Blair Memorial Hospital
Address: 1225 Warm Springs Ave.
Huntingdon, PA 16652
Phone: 814-643-8656
email: mpierce@jcblair.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Jessop Steel, LLC :
[Print name of Settling Defendant]

8-5-2016

Dated


Elliot S. Davis
Name (print): Elliot S. Davis
Title: Sr. Vice President
Address: 1000 Six PPG Place
Pittsburgh, PA 15222

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Matthew J. Engott
Title: Assistant General Counsel
Company: Jessop Steel, LLC
Address: 1000 Six PPG Place
Pittsburgh, PA 15222
Phone: 412-394-2910
email: matth.engott@atimetals.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Jet Electric Motor Company, Inc. :
[Print name of Settling Defendant]

8-15-16
Dated


Name (print): MICHAEL ZOROWSKI
Title: PRESIDENT
Address: 688 SCHOOL ST.
PAWTUCKET, R.I.

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Bret W. Jedele, Esq.</u>
	Title:	<u>Partner</u>
	Company:	<u>Chace Ruttenberg & Freedman, LLP</u>
	Address:	<u>One Park Row, Suite 300</u>
		<u>Providence, RI 02903</u>
	Phone:	<u>401-453-6400</u>
	email:	<u>bjedele@crfilp.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR John E. Kelly & Sons / Kelly Electric
[Print name of Settling Defendant]

8/16/16
Dated

Stephen P. Kelly, Sr
Name (print): Stephen P. Kelly, Sr
Title: President
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Kingsport Power Company
[Print name of Settling Defendant]

August 10, 2016
Dated

Charles R. Patton
Name: Charles R. Patton
Title: President & COO
Address: Laidley Tower Suite 800
500 Lee St. East
Charleston, WV 25301

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Charles R. Patton
Title: President & COO
Company: Appalachian Power Co.
Address: Laidley Tower Suite 800
500 Lee St., East
Charleston, WV 25301
Phone: (304)348-4152
email: crpatton@aep.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Koch Industries, Inc. :
[Print name of Settling Defendant]

8/4/16

Dated

Sheryl Corrigan



Name (print): Sheryl Corrigan

Title: Director, EH&S

Address: 4111 East 37th Street North
Wichita, KS 67220

Agent Authorized to Accept Service Name (print):
on Behalf of Above-signed Party: Title:

General Counsel

Company: Koch Companies Public Sector, LLC

Address: 4111 East 37th Street North
Wichita, KS 67220

Phone: (316) 828-5500

email:

Signature Page for CD regarding the Ward Transformer Superfund Site

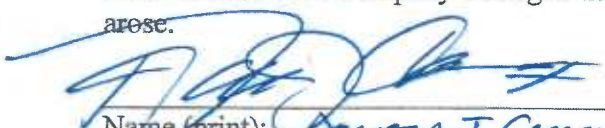
Kraft Heinz Foods Company, for itself, and on behalf of Mondelēz Global LLC but only to the extent that Mondelēz Global LLC's alleged liability with respect to the Site arose in connection with the same transactions from which Kraft Heinz Foods Company's alleged liability arose

FOR Kraft Heinz Foods Company*
[Print name of Settling Defendant]

* for itself, and on behalf of Mondelēz Global LLC but only to the extent that Mondelēz Global LLC's alleged liability with respect to the Site arose in connection with the same transactions from which Kraft Heinz Foods Company's alleged liability arose.

8/15/16
Dated


Agent Authorized to Accept Service
on Behalf of Above-signed Party:


Name (print): Donald J. Camerson
Title: Bressler Amery & Ross, P.C.
Address: ATTORNEYS FOR KRAFT HEINZ FOODS
325 Columbia Turnpike Company
Fleaham Park, NJ 07932
Name (print): Donald J. Camerson
Title: ATTORNEY
Address: Bressler Amery & Ross, P.C.
325 Columbia Turnpike
Fleaham Park, N.J.
07932
Phone: 973 660 4433
email: djcamerson@bressler.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR LaCrosse Footwear, Inc. :
[Print name of Settling Defendant]

8/1/16
Dated



Name (print): KOYA OBA
Title: PRESIDENT
Address: 17634 NE AIRPORT WAY
PORTLAND, OR 97230

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Latarge Mid-Atlantic, LLC:
[Print name of Settling Defendant]

8/16/16
Dated


Name (print): William G. Miller
Title: Vice President
Address: 6401 Golden Triangle Dr., Suite 400
Greenbelt, Maryland ~~20770~~ 20770

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): William G. Miller
Title: Vice President
Company: Latarge Mid-Atlantic LLC
Address: 6401 Golden Triangle Dr., Suite 400
Greenbelt, Maryland ~~20770~~ 20770
Phone: (301) 982-1497
email: bill.miller@latargeholcim.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR LEWIS Electric Supply Co. Inc
[Print name of Settling Defendant]

8/1/16
Dated

Patricia K. Lewis
Name (print):
Title: Secy Treas.
Address: 1306 2nd Street
Muscle Shoals AL 35661

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Patricia K. Lewis
Name (print):
Title:
Company:
Address:
Phone:
email:

~~resolute mgmt. co~~

~~lwhite@resolutiomgmt.com~~

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Town of Louisburg :
[Print name of Settling Defendant]

8/11/16
Dated

Karl T. Pernell
Name (print): Karl T. Pernell
Title: Mayor
Address: 110 W. Nash Street Louisburg, NC

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Jonathan Franklin
Title: Town Administrator
Company: Town of Louisburg
Address: 110 W. Nash Street
Louisburg, NC 27549
Phone: 919-497-1004
email: jfranklin@nc.rr.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Martin Marietta Materials, Inc.
[Print name of Settling Defendant]

8-15-16
Dated

Roselyn Bar
Name (print)
Title: EVP, General Counsel + Corporate Secretary
Address: 2710 Wycliff Road, Raleigh, NC 27607

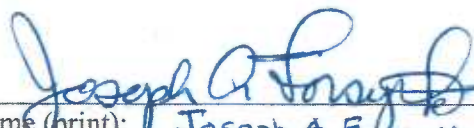
Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): _____
Title: _____
Company: C.T. Comp System
Address: 150 Fayetteville St. Box 1011
Raleigh NC 27601
Phone: 214-979-9480 (Service team)
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Mass. Electric Construction Co.:
[Print name of Settling Defendant]

8-11-16
Dated



Name (print): Joseph A. Forsythe
Title: Senior Vice President
Address: 400 Totten Pond Road, Suite 400
Waltham, MA. 02451

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>N/A</u>
	Title:	<u></u>
	Company:	<u>CT Corporation System</u>
	Address:	<u>155 Federal Street, Suite 700</u> <u>Boston, MA 02110</u>
	Phone:	<u></u>
	email:	<u></u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR MIDAMERICAN ENERGY COMPANY:

July 29, 2016
Dated


Jennifer McIvor
Vice President, Environmental Programs, Compliance
and Permitting
MidAmerican Energy Company
PO Box 657
Des Moines, IA 50309

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Paul Leighton
Vice President and Senior Trading Counsel
MidAmerican Energy Company
4299 Northwest Urbandale Dr.
Urbandale, IA 50322-7916
515-242-4099
PJLeighton@MidAmerican.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Mid-Valley Pipeline Company:
[Print name of Settling Defendant]

8/24/16
Dated



Name (print): D. R. Chalson
Title: Vice President
Address: 4041 Market St., Aston, PA 19014

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Kevin Dunleavy
Title: Chief Counsel
Company: Sunoco Inc
Address: 3801 West Chester Pike
Newtown Square, PA 19073
Phone: 215-927-6373
email: Kevin.dunleavy@sunoco.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

^{K/n/a} Jackson County Iron Company
FOR Mittal Steel-Lancashire Coal: Inc.
[Print name of Settling Defendant]

8-15-14
Dated

Mark Jeske
Name (print): Mark Jeske
Title: Corp. Sec.
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Lisa S. Zebowitz
Title: Attorney
Company: Neal, Gerber & Eisenberg, LLP
Address: 2 N La Salle Street
Chicago IL 60602 - 3801
Phone: 312-269-8033
email: lzebovitz@ngelaw.com

NOTE: A separate signature page must be signed by each settlor.

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR 
CITY OF MONROE

August 18, 2016
Dated

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

EL Faison
Name (print): E.L. Faison
Title: City Manager
Address: Post Office Box 69
Monroe, North Carolina 28111

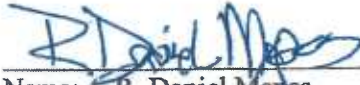
Name (print): E.L. Faison
Title: City Manager
Company: City of Monroe
Address: Post Office Box 69
Monroe, North Carolina 28111
Phone: (704) 282-4500
email: lfaison@monroenc.org

Signature Page for CD regarding the Ward Transformer Superfund Site.

FOR NATIONAL LIME AND STONE COMPANY
[Print name of Settling Defendant]

8-18-2016

Date


Name: R. Daniel Mapes
Title: Director of Administrative Services
Address: 551 Lake Cascades Parkway
Second Floor
P.O. Box 120
Findlay, OH 45840

Agent Authorized to Accept Service
On Behalf of Above-signed Party:

Name (print): Thomas W. Palmer, Esq.
Title: Corporate Counsel
Company: Marshall & Melhorn, LLC
Address: Four SeaGate, 8th Floor
Toledo, OH 43604
Phone: (419) 249-7100
Email: palmer@marshall-melhorn.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR National Railroad Passenger Corporation
[Print name of Settling Defendant]

August 3, 2016
Dated



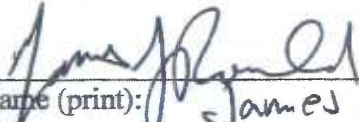
Name (print): William Herrmann
Title: VP & Managing Deputy General Counsel
Address: 60 Massachusetts Avenue, NE
Washington, DC 20002

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Eleanor D. Acheson, Executive VP,
Title: Chief Legal Officer, Gen. Coun. & Corp. Sec.
Company: National Railroad Passenger Corporation
Address: 60 Massachusetts Avenue, NE
Washington, DC 20002
Phone: (202) 906-2198
email: Achesoe@Amtrak.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR NEW HAMPSHIRE INSURANCE COMPANY:

7/27/16
Dated


Name (print): James J. Rowland
Title: VP + Asst. Comptroller
Address:

7/28/16
Dated



Name (print): Martin Bogot
Title: Assistant Secretary
Address:

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): DEVALEENA DAS
Title: ASSOCIATE GENERAL COUNSEL
Company: NEW HAMPSHIRE INSURANCE COMPANY
Address: 175 WATER STREET, 15TH FLOOR
NEW YORK, NY 10038
Phone: (212) 458-7765
email: devaleena.das@aig.com

Signature Page for CD regarding the Ward Transformer Superfund Site

Niagara Mohawk Power Corporation
FOR d/b/a National Grid :
[Print name of Settling Defendant]

8/19/16
Dated



Name (print): Charles Willard JP
Title: Authorized Representative
Address: 300 Erie Blvd W
Syracuse NY 13202

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: New York Dept of State
Address: c/o Corporation Service Company
80 State Street
Phone: Albany, NY 11207-2543
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Norfolk Southern Railway Company :
[Print name of Settling Defendant]

8/15/16
Dated


Name (print): Helen M. Hart
Title: General Solicitor
Address: 3 Commercial Place, Norfolk, VA 23510

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Helen M. Hart
Title: General Solicitor
Company: Norfolk Southern Corporation
Address: 3 Commercial Place
Norfolk, VA 23510
Phone: 757-629-2752
email: helen.hart@nscorp.com


Signature Page for CD regarding the Ward Transformer Superfund Site

NC Department of Agriculture & Consumer
Services a/k/a NC State Fair

FOR _____:
[Print name of Settling Defendant]

8.9.2016

Dated


Name (print): A. David Smith
Title: Chief Deputy Commissioner
Address: NC Department of Agriculture & Consumer Services
1001 Mail Service Center
Raleigh, NC 27699-1001

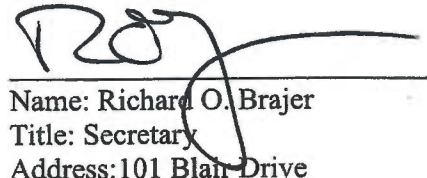
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Tina L. Hlabse
Title: General Counsel
Company: NC Department of Agriculture & Consumer Services
Address: 1001 Mail Service Center
Raleigh, NC 27699-1001
Phone: 919-707-3013
email: Tina.Hlabse@ncagr.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

**FOR: North Carolina Department of
Health and Human Services (NC DHHS)**

Aug. 15, 2016
Dated



Name: Richard O. Brajer
Title: Secretary
Address: 101 Blair Drive
2001 Mail Service Center
Raleigh, NC 27699-2001

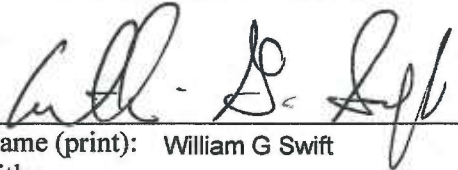
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name: Lisa Granberry Corbett
Title: Deputy General Counsel and
Process Agent
Company: NC DHHS
Address: 101 Blair Drive
2001 Mail Service Center
Raleigh, NC 27699-2001
Phone: (919) 855-4800
email: lisa.corbett@dhhs.nc.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The North Carolina Granite Corporation :
[Print name of Settling Defendant]

August 16, 2016
Dated

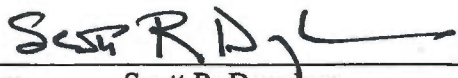

Name (print): William G Swift
Title: President & CEO
Address: 151 Granite Quarry Trail
Mt Airy, NC 27030

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Denis E. Jacobson
Title: Attorney at Law
Company: Tuggle Duggins P.A.
Address: P.O. Box 2888
Greensboro, NC 27402
Phone: (336) 378-1431
email: djacobson@tuggleduggins.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR NORTH CAROLINA STATE UNIVERSITY:

8.16.2016
Dated



Name: Scott R. Douglass
Title: Vice Chancellor for Finance and
Administration
Address: Campus Box 7201
106 Holladay Hall
Raleigh, NC 27695-7201

Agent Authorized to Accept Service Name: Brenton W. McConkey
On Behalf of Above-signed Party: Title: Assistant General Counsel
Company: North Carolina State University
Office of General Counsel
Address: Campus Box 7008
304D Holladay Hall
Raleigh, NC 27695-7008
Phone: 919-513-4051
email: brent_mcconkey@ncsu.edu

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR NOVARTIS CORPORATION:
[Print name of Settling Defendant]

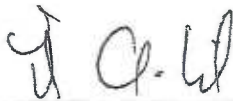
AUG. 18, 2016
Dated


Name (print): BARRY ROSENFELD
Title: SECRETARY
Address: 230 PARK AVE.
21ST FLOOR
NEW YORK, NY 10169

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Keith P. McManus, Esq.</u>
	Title:	<u>Attorney for Novartis Corporation</u>
	Company:	<u>Bressler, Amery & Ross, P.C.</u>
	Address:	<u>325 Columbia Turnpike Suite 301</u>
		<u>Florham Park, New Jersey 07932</u>
	Phone:	<u>973-514-1200</u>
email:	<u>kmcmamus@bressler.com</u>	

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Nucor Corporation :
[Print name of Settling Defendant]



August 1, 2016
Dated

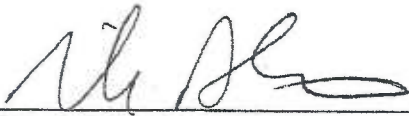
Name (print): Tomas A. Miller
Title: Vice President and General Manager of Environmental Affairs
Address: 1915 Rexford Rd.
Charlotte, NC 28211

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Nucor Corporation</u>
	Title:	<u>Office of General Counsel</u>
	Company:	<u></u>
	Address:	<u>1915 Rexford Rd</u>
		<u>Charlotte, NC 28211</u>
		<u>(704) 366-7000</u>
Phone:		
email:		<u>Greg.Murphy@nucor.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Occidental Chemical Corporation :
[Print name of Settling Defendant]

8/8/16
Dated


Name (print): Michael G. Anderson
Title: Vice President
Address: 5 Greenway Plaza, Suite 110
Houston, Texas 77046

Agent Authorized to Accept Service	Name (print):	Frank A. Parigi
on Behalf of Above-signed Party:	Title:	Vice President and General Counsel
	Company:	Glenn Springs Holdings, Inc.
	Address:	5005 LBJ Freeway
		Dallas, Texas 75244
	Phone:	(972) 687-7503
	email:	frank_parigi@oxy.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Orbital ATK, Inc. :
[Print name of Settling Defendant]

18 Aug 2016
Dated

Elizabeth A. Humphrey
Name (print): Elizabeth Ann Humphrey
Title: Sr. Director, Finance & HR for
Address: Patrick Nolan, VP/Gen. Mgr.
1501 S. Clinton Street, 11th Fl.
Baltimore, MD 21224

Agent Authorized to Accept Service Name (print):
on Behalf of Above-signed Party: Title:

Company:
Address:


CT Corporation
4701 Cox Road, Suite 285
Glen Allen, VA 23060

Phone:
email:

Signature Page for CD regarding the Ward Transformer Superfund Site

Owen Electric Steel Company
FOR of South Carolina :
[Print name of Settling Defendant]

8/15/14
Dated

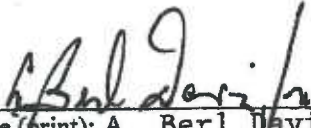

Name (print): Paul Kirkpatrick
Title: Secretary
Address: 6565 N. MacArthur Blvd.
Suite 800
Irving, TX 75039

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: C.T. Corporation
Address: 1999 Bryan Street
Suite 900, Dallas, TX 75201
Phone: 846-665-5799
email: ct.walters@kluwer.com

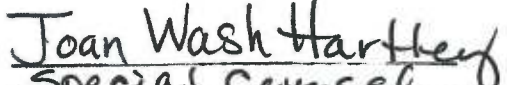
Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Palmetto Electric Cooperative, Inc.
[Print name of Settling Defendant]

August 16, 2016
Dated


Name (print): A. Berl Davis, Jr.
Title: President and CEO
Address: 1 Cooperative Way
Hardeeville, SC 29927

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print):



Title: Special Counsel
Company: Nexsen Pruet, LLC
Address: 1230 Main St., Ste 700
Columbia SC 29201
Phone: 803-540-2129
email: jhartley@nexsenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR PARKER HANNIFIN CORPORATION
[Print name of Settling Defendant]

August 4, 2016

Dated


Name (print): JOSEPH R. LEONTI
Title: VICE PRESIDENT, GENERAL COUNSEL AND SECRETARY
Address: 6035 PARKLAND BLVD.
CLEVELAND, OH 44124-4141

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): JOSEPH R. LEONTI
Title: VP, GENERAL COUNSEL AND SECRETARY
Company: PARKER HANNIFIN CORPORATION
Address: 6035 PARKLAND BLVD
CLEVELAND, OH 44124-4141
Phone: 216-896-2887
email: jleonti@parker.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR PCS Phosphate Company, Inc. :
[Print name of Settling Defendant]

8/15/16
Dated


Name (print): Robert Smith
Title: President
Address: 1101 Skokie Blvd, Suite 400, Northbrook, IL 60062

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Mary Beth Deemer
Title: Partner
Company: Jones Day
Address: 500 Grant St, Suite 4500
Pittsburgh, PA 15219
Phone: 412-394-7920
email: mbdeemer@jonesday.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: CITY OF PHILADELPHIA

8/18/2016
Dated

Patrick K. O'Neill

Patrick K. O'Neill, Esq.
Divisional Deputy City Solicitor
City of Philadelphia Law Department
1515 Arch Street, 16th Floor
Philadelphia, PA 19103

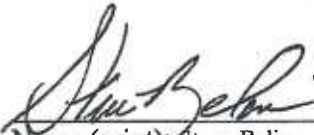

Agent Authorized to Accept Service
On Behalf of Above-signed Party

Name: Patrick K. O'Neill, Esq.
Title: Divisional Deputy City Solicitor
Mailing Address: City of Philadelphia
Law Department
1515 Arch Street, 16th Fl.
Philadelphia, PA 19102
Phone Number: 215-683-5172
Email: patrick.oneill@phila.gov

Signature Page for CD regarding the Ward Transformer Superfund Site

Phillips 66 Company as successor in interest
FOR to ConocoPhillips Company _____:
[Print name of Settling Defendant]

8-10-16
Dated

 
Name (print): Steve Belin
Title: Remediation Manager, Phillips 66 Company
Address: 420 South Keeler, PB-17-1715,
Bartlesville, Oklahoma 74003


Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Steve Belin
Title: Remediation Manager, Phillips 66 Company
Company: Phillips 66 Company
Address: 420 S. Keeler Ave. PB-17-1715
Bartlesville, Oklahoma 74003
Phone: 918.977.5399
email: Steve.A.Belin@p66.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR PPL Electric Utilities Corp :
[Print name of Settling Defendant]



8/17/16
Dated



Name (print): Michael Hasel
Title: MANAGER CU ENVIRONMENTAL
Address: 2 N. 9th Street
Allentown, PA 18101

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Arundhati Khanwalkar
Title: Sr Counsel & Corp Compliance Director
Company: PPL Services Corporation
Address: Two North Ninth Street
Allentown, PA 18101-1179
Phone: 610-774-5466
email: akhanwalkar@pplweb.com

Signature Page for CD regarding the Ward Transformer Superfund Site

August 15, 2016

City of Radford, Virginia



David C. Ridpath
City Manager
10 Robertson Street, Radford, Virginia 24141

Agent Authorized to Accept Service
On behalf of Above-signed Party:

Name:	Gail Cook DeVilbiss
Title:	Radford City Attorney
Company:	Gail Cook DeVilbiss, P.C.
Address:	1128 East Main Street Radford, Virginia 24141
Phone Number:	(540) 639-4056
Email:	gcdlaw@verizon.net

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: RESIDUAL ENTERPRISES CORPORATION
[Print name of Settling Defendant]

7-25-16
Dated



Name (print): Nathan D. Goldman
Title: Vice President
Address: 500 Water Street-J150, Jacksonville, FL 32202


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): JEFFREY W. STYRON
Title: SENIOR COUNSEL - ENVIRONMENTAL
Company: CSX TRANSPORTATION, INC.
Address: 500 WATER ST., J150
JACKSONVILLE, FL 32202
Phone: (904) 366-4058
email: JEFF-STYRON@CSX.COM

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Riley Power Inc. :
[Print name of Settling Defendant]

August 1, 2016
Dated


Name (print): Anthony A. Brandano
Title: Vice President, Treasurer and Chief Financial Officer
Address: 5 Neponset Street, Worcester, MA 01606

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Bradley Friesen, Esq.
Title: _____
Company: Bell Davis Pitt
Address: 100 N. Cherry Street, Suite 600
Winston-Salem, NC 27101
Phone: 336-722-3700
email: bfriesen@belldavispitt.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Roanoke Electric Steel Corporation:

8/8/16
Dated

T. Joe Crawford
Name (print): T. Joe Crawford
Title: Vice President and General Manager
Address: 102 Westside Boulevard NW
Roanoke, VA 24017


Agent Authorized to Accept Service
On Behalf of Above-signed Party:


Name (print): David R. Steiner
Title: Attorney for Roanoke Electric Steel
Corporation
Company: Barrett McNagny LLP
Address: 215 East Berry Street
Fort Wayne, IN 46802
Phone: (260) 423-8915
email: drs@barrettlaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Robert Bosch LLC :
[Print name of Settling Defendant]

8/17/16
Dated


Stephen Borgsdorf
Senior Legal Counsel NA
38000 Hills Tech Drive
Farmington Hills, MI 48331
Agent Authorized to Accept Service
on Behalf of Above-signed Party:

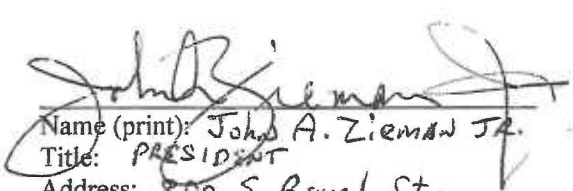

Name (print): Jerry Johnson
Title: Deputy General Counsel NA
Address: 38000 Hills Tech Drive
Farmington Hills, MI 48331

Title: _____
Company: CSC - LAWYERS INCORPORATING SERVICE
Address: 601 ABBOT RD.
EAST LANSING, MI 4823
Phone: 1-866-403-5272
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Royal Street Junk Co., Inc. :
[Print name of Settling Defendant]

8/3/2016
Dated


Name (print): John A. Ziemann Jr.
Title: PRESIDENT
Address: 800 S. Royal St.
Mobile, AL 36603

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Jacob H. Wellman
Title: Partner
Company: Teague Campbell Dennis & Gorham, LLP
Address: P. O. Box 19207
Raleigh, NC 27619-9207
Phone: (919) 873-0166
email: jwellman@teaguecampbell.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Rubbermaid Inc./Newell Brands Inc. (f/k/a
[Print name of Settling Defendant] Newell
Rubbermaid
Inc.)

8/1/2016
Dated



Name (print): Michael R. Peterson
Title: Assistant Secretary
Address: 6655 Peachtree Dunwoody Road
Atlanta, Ga. 30022

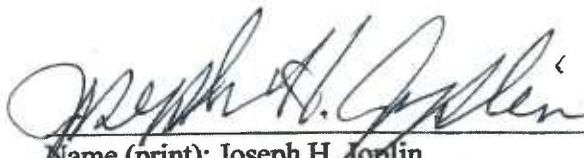
Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print):

Kristin Jones
Title: Senior Environmental & Regulatory
Company: Newell Brands Inc. Counsel
Address: 6655 Peachtree Dunwoody Rd.
Atlanta, GA 30022
Phone: (770) 418.7822
email: Kristin.jones@newellco.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Rutherford Electric Membership Corporation:

8/5/16
Dated


Name (print): Joseph H. Joplin
Title: General Manager
Address: P.O. Box 1569, Forest City, NC
28043


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Joseph H. Joplin
Title: General Manager
Company: Rutherford Electric Membership
Corporation
Address: P.O. Box 1569
Forest City, NC 28043
Phone: 828-245-1621
email: jjoplin@remc.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The City of San Antonio, acting by and through
City Public Service Board ("CPS Energy"):

8/25/2016
Dated



Name (print): Paul Barham
Title: Senior Vice President of
Delivery Engineering, Integrated Planning,
Substation & Transmission
Address: 145 Navarro
P.O. Box 1771
San Antonio, Texas 78296

Agent Authorized to Accept Service On behalf of Above-signed Party: Name (print): Carolyn Shellman
Title: Chief Legal & Administrative Officer
Company: The City of San Antonio, acting by and through
City Public Service Board ("CPS Energy")
Address: 145 Navarro
P.O. Box 1771
San Antonio, Texas 78296
Phone: (210) 353-4996
Email: CEShellman@CPSEnergy.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR  Santee Electric Cooperative, Inc.
[Print name of Settling Defendant]

8/8/16
Dated


Name (print): Robert G. Ardis III
Title: President & CEO
Address: 424 Sumter Hwy
Kingsree, SC 29556

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

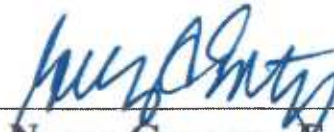
Name (print): Joan Wash Hartley
Title: Special Counsel
Company: Nexsen Pruet, LLC
Address: 1230 Main St., Ste. 700
Columbia SC 29201
Phone: 803-540-2129
email: jhartley@nexsenpruet.com

**Signature Page for CD regarding the Ward
Transformer Superfund Site**

FOR **Seabrook Enterprises, Inc.**

9-11-16

Dated



Name Gregory Estep

Title: President and Board Member

Address: 205 E. River Park Circle,

Suite 310

Fresno, CA 93720



Agent Authorized to Accept Service Name

(print): Carl Askey

On Behalf of Above-signed Party: Title: Vice-
President – Finance/Olam Edible Nuts

Company: Seabrook Enterprises, Inc.

Address: 2077 Convention

Center Concourse, Suite 150

College Park, GA 30337

Phone: 404-209-2626

email: carl.askey@olamnet.

com

TRI1\947396v1

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Shieldalloy Metallurgical Corporation
[Print name of Settling Defendant]

8/19/2016
Dated

Dennis R. Shea
Name (print): Dennis R. Shea
Title: Director
Address: 35 S.W. Boulevard
P.O. Box 768
Newfield, NJ 08344

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Dennis R. Shea
Title: Director
Company: Shieldalloy Metallurgical Corporation
Address: 435 Devon Park Drive, Building 201
Wayne, PA 19087
Phone: 610-293-5812
email: dshea@amy-nv.com

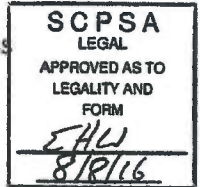
Signature Page for CD regarding the Ward Transformer Superfund Site

FOR South Carolina Public Service Authority:

8/15/16
Date

Parcels J. Williams

Name: Pamela J. Williams
Title: Sr. Vice President, Corporate Services
Address: One Riverwood Drive
Moncks Corner, SC 29461



Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name: Elizabeth H. Babs Warner
Title: VP, Legal Services & Corporate Secretary
Company: Santee Cooper
Address: One Riverwood Drive
Moncks Corner, SC 29461
Phone: 843-761-7004
Email: ehwarner@santeecooper.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR South Central Power Company
[Print name of Settling Defendant]

July 25, 2016
Dated

Richard Lemonds
Name (print): Richard Lemonds
Title: President and CEO
Address: 2780 Coonpath Rd NE
Lancaster OH 43130

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Richard Lemonds
Title: President & CEO
Company: South Central Power Company
Address: 2780 Coonpath Rd NE
Lancaster Ohio 43130
Phone: 740-689-6181
email: lemonds@southcentralpower.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR SOUTHERN ALLOY CORPORATION ;
[Print name of Settling Defendant]

8/5/2016
Dated

Billy T. Bobbitt
Name (print): Billy T. Bobbitt
Title: President
Address: Post Office Box 1168
Sylacauga, Alabama 35150


Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Billy T. Bobbitt
Title: Registered Agent
Company: Southern Alloy Corporation
Address: 36280 U. S. Highway 280
Sylacauga, Alabama 35150-1168
Phone: (256) 245-5237
email: bbobbitt@southernalloy.com

Certified # 7014 0150 0001 9019 2245

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Southern Maryland Electric Cooperative, Inc. :
[Print name of Settling Defendant]

08/16/2016
Dated

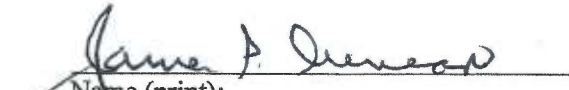

Name (print): Austin J. Slater, Jr.
Title: President & C.E.O.
Address: Southern Maryland Electric Cooperative, Inc.
15035 Burnt Store Road
P.O. Box 1937
Hughesville, MD 20637

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Mark A. MacDougall
Title: Senior Vice President and General Counsel
Company: Southern Maryland Electric Cooperative, Inc
Address: 15035 Burnt Store Road, P.O. Box 1937
Hughesville, MD 20637
Phone: (301) 274-4307
email: Mark.Macdougall@smeca.coop

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Sumter Electric Cooperative, Inc.
[Print name of Settling Defendant]

8/5/2016
Dated



Name (print):
Title:
Address:

Agent Authorized to Accept Service	Name (print):	<u>Lewis W. Stone</u>
on Behalf of Above-signed Party:	Title:	<u>Attorney</u>
	Company:	<u>Stone & Gerken, P.A.</u>
	Address:	<u>4850 N. Highway 19A</u>
		<u>Mount Dora, FL 32757</u>
	Phone:	<u>352-357-0330</u>
	email:	<u>Lewis@StoneandGerken.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR SUNBELT TRANSFORMER, LTD :
[Print name of Settling Defendant]

AUGUST 2, 2016
Dated



Name (print): JAMES GENTRY
Title: CFO
Address: 1922 SOUTH MLK JR. DRIVE
TEMPLE, TX 76504

Agent Authorized to Accept Service Name (print): _____
on Behalf of Above-signed Party: Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Tallahassee Memorial HealthCare, Inc. :
[Print name of Settling Defendant]

8/18/2016
Dated


Name (print): William A. Giudice
Title: Vice President and Chief Financial Officer
Address: 1300 Miccosukee Road
Tallahassee, FL 32308

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Susan K. Spurgeon, Esq.
Title: Attorney
Company: Pennington, P.A.
Address: 2701 N. Rocky Point Drive, Suite 900
Tampa, FL 33607
Phone: 813-639-9599
email: susan@penningtonlaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR TOWN OF TARBORO :
[Print name of Settling Defendant]

8/12/16
Dated

Taro Knight
Name (print): Taro Knight
Title: Mayor-ProTempore
Address: P.O. Box 220
500 Main Street
Tarboro, NC 27886

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Troy R. Lewis
Title: Town Manager
Company: Town of Tarboro
Address: P.O. Box 220 500 Main St.
Tarboro, NC 27886
Phone: 252-641-4250
email: TroyLewis@tarboro-nc.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Timken US LLC :
[Print name of Settling Defendant]

8/15/2016
Dated



Name (print) David B. Nolin
Title: Director - Legal Services
Address: 4500 Mount Pleasant St. NW
North Canton, OH 44720

**Agent Authorized to Accept Service
On Behalf of Above-signed Party:**

Name (print): David B. Nolin
Title: Director - Legal Services
Company: The Timken Company
Address: 4500 Mount Pleasant St. NW
North Canton, OH 44720
Phone: 234-262-4363
email: david.nolin@timken.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Transcontinental Gas Pipe Line Co., LLC
[Print name of Settling Defendant] *RM*

8/3/16
Dated

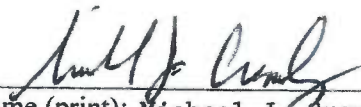
Rebecca Brown
Name (print): Rebecca Brown
Title: Manager, Environmental Services
Address: One Williams Center
Tulsa, OK 74172

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Donald E. Hockaday, III
Title: Senior Counsel
Company: Transcontinental Gas Pipe Line Co., LLC
Address: 2800 Post Oak Boulevard
Houston, TX 77056
Phone: (713) 215-2381
email: donald.e.hockadayiii@williams.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Trap Rock Industries, Inc. :
[Print name of Settling Defendant]

August 15, 2016
Dated

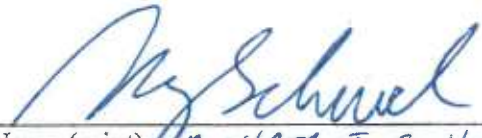

Name (print): Michael J. Crowley
Title: Vice President
Address: P.O. Box 419
Kingston NJ 08528

Agent Authorized to Accept Service on Behalf of Above-signed Party:	Name (print):	<u>Bonnie A. Barnett</u>
	Title:	<u>Esquire</u>
	Company:	<u>Drinker Biddle & Reath LLP</u>
	Address:	<u>One Logan Sq., Ste. 2000</u>
		<u>Phila., PA 19103</u>
	Phone:	<u>215-988-2916</u>
	email:	<u>bonnie.barnett@dbr.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR TREDEGAR FILM PRODUCTS CORPORATION:

8/10/16
Dated



Name (print): MICHAEL J. SCHEWEL
Title: Vice President, General Counsel & Secretary
Address: 1100 Boulders Parkway
Richmond VA 23225

Agent Authorized to Accept Service	Name:	<u>Dan J. Jordanger</u>
on Behalf of Above-signed Party:	Title:	<u>Partner</u>
	Company:	<u>Hunton & Williams LLP</u>
	Address:	<u>951 East Byrd Street</u>
		<u>Richmond, Virginia 23219</u>
	Phone:	<u>(804) 788-8609</u>
	email:	<u>djordanger@hunton.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Trinity Industries, Inc. :
[Print name of Settling Defendant]

8-2-16
Dated



Name (print): S. Theis Rice
Title: Sr. VP and CLO
Address: 2525 N. Stemmons Fwy.
Dallas, TX 75201

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: _____
Address: _____
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Trustees of the University of Pennsylvania:

August 3, 2016
Dated



Name (print): Benjamin J. Evans
Title: Executive Dir., Office of Risk Mgmt. & Ins.
Address: 3431 Walnut Street
Room 421 Franklin Bldg.
Philadelphia, PA 19104

Agent Authorized to Accept Service Name (print): Brendan K. Collins
on Behalf of Above-signed Party:

Company: Ballard Spahr LLP
Address: 1735 Market Street, 51st Flr.
Philadelphia, PA 19103
Phone: 215-864-8106
email: collins@ballardspahr.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Union Carbide Corporation
[Print name of Settling Defendant]

8-5-16
Dated


Mary J Drawes
Name (print): Mary F. Drawes
Title: Authorized Representative
Address: 1790 Building
Midland, MI 48674

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: CT Corporation System
Address: 111 Eighth Ave
New York, NY 10011
Phone: _____
email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR United States Pipe and Foundry Company, LLC
[Print name of Settling Defendant]

8/12/16
Dated


Name (print): Brad Overstreet
Title: CFO
Address: Two Chase Corporate Drive
Suite 200
Birmingham, AL 35244

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Geoff Rathgeber
Title: Associate
Company: Alston + Bird LLP
Address: 1201 W. Peachtree St
Atlanta, GA 30309
Phone: 404.881.4974
email: Associate geoff.rathgeber@alston.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR United States Steel Corporation :
[Print name of Settling Defendant]

8/15/2016
Dated



Name (print): Andrew G. Thiros
Title: Counsel-Environmental
Address: 600 Grant Street, Room 1500
Pittsburgh, PA 15219

Agent Authorized to Accept Service	Name (print):	<u>Andrew G. Thiros</u>
on Behalf of Above-signed Party:	Title:	<u>Counsel-Environmental</u>
	Company:	<u>United States Steel Corporation</u>
	Address:	<u>600 Grant Street, Room 1500</u>
		<u>Pittsburgh, PA 15219</u>
	Phone:	<u>412-433-2983</u>
	email:	<u>agthiros@uss.com</u>

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR: Unitil Energy Systems Inc.



Dated: 08/15/2016

Name (print): Richard Franzio

Title: Dir. Business Continuity & Compliance

Address: 6 Liberty Lane West, Hampton, NH 03842

Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): _____

Title: _____

Company: _____

Address: _____

Phone: _____

email: _____

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR The University of North Carolina at Chapel Hill:
[Print name of Settling Defendant]



A. BRADLEY IVES, ASSOC. VICE CHANCELLOR FOR

Name (print): Matthew M. Fajack
Title: Vice Chancellor for Finance and Administration
Address: 300 South Building, 200 E. Cameron Avenue
Chapel Hill, NC 27599

8/10/16
Dated

**Agent Authorized to Accept Service
On Behalf of Above-signed Party:**

Name (print): David E. Fox
Title: Attorney
Company: Moore & Van Allen PLLC
Address: 100 North Tryon Street, Suite 4700
Charlotte, NC 28202-4003
Phone: (919) 286-8069
email: davidfox@mvalaw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR VEOLIA ENVIRONMENTAL SERVICES NORTH AMERICA LLC, for itself and on behalf of Veolia ES Montenay Holdings LLC, but only to the extent that Veolia ES Montenay Holdings LLC's alleged liability with respect to the Site arose in connection with the same transaction from which Veolia Environmental Services North America LLC's alleged liability arose

Aug. 8, 2016
Dated



Francis X. Ferrara
Senior Vice President & Deputy General Counsel
Veolia North America
120 Water Street
North Andover, MA 01845

Agent Authorized to Accept Service
on Behalf of Above –signed Party:

Philip G. Kief
Director, Corporate Counsel, Industrial Business
Veolia North America
4760 World Houston Parkway, Suite 100,
Houston, TX 77032
832-300-5748
Philip.kief@veolia.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Villanova University:
[Print name of Settling Defendant]

8/18/16
Dated


Debra F. Fickler
Name (print): Debra F. Fickler
Title: Vice President and General Counsel
Address: 800 Lancaster Avenue
Villanova, PA 19085

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Michael T. Hamilton
Title: Attorney
Company: Marks O'Neill O'Brien Doherty & Kelly P.C.
Address: 1800 JFK Blvd.
Suite 1900 Philadelphia, Pa 19103
Phone: 215-564-6688
email: mhamilton@moodk/qw.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Virginia Electric & Power Company
[Print name of Settling Defendant]

7/26/16
Dated


Name (print): Mark O. Webb
Title: Sr. V.P. & General Counsel
Address: 120 Tredegar St.
Richmond, VA 23219

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: CT Corporation System
Address: 4701 Cox Road
Suite 285
Phone: Glen Allen, VA 23060
email: (804) 217-7255

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Vulcan Construction Materials, LLC
[Print name of Settling Defendant]

8/5/16
Dated


Jerry F. Atkins, Jr.
Name (print): Jerry F. Atkins, Jr.
Title: MANAGER & SECRETARY
Address: 1200 Urban Center Drive
Birmingham, AL 35242

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Doug Arnold
Title: Partner
Company: Alston and Bird LLP
Address: 1201 West Peachtree St.
Atlanta, GA 30309
Phone: (404) 881-7000
email: doug.arnold@alston.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Warren Electric Cooperative, Inc.:
[Print name of Settling Defendant]

8/2/16
Dated


Name (print): Gary W. Franklin
Title: Chief Executive Officer
Address: 320 East Main Street
Youngsville, PA 16371

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): Joan W. Hartley, Esq.
Title: Counsel
Company: Nexsen Pruet, LLC
Address: 1230 Main Street, Suite 700
Columbia, SC 29201
Phone: (803) 540-2129
email: jhartley@nexsenpruet.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Wartburg College:
[Print name of Settling Defendant]

July 29, 2016
Dated

Wartburg College by Rich Seggerman
Name (print) Wartburg College by Rich Seggerman
Title: VP for Finance and Administration
Address:

**Agent Authorized to Accept Service
On Behalf of Above-signed Party:**

Name (print): Rich Seggerman
Title: VP for Finance and Administration
Company: Wartburg College
Address: 100 Wartburg Blvd
Waverly, IA 50677

Phone: 319-830-9201
email: Richard.seggerman@wartburg.edu

TRI1\947396v1

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Weyerhaeuser Company _____ :

8/2/16
Dated



Name: (print) Devin Stockfish
Title: Senior Vice President Counsel and
Corporate Secretary
Address: 33663 Weyerhaeuser Way S
Federal Way, WA 98003

Agent Authorized to Accept Service Name (print): Rachel McCall
On Behalf of Above-Signed Party: Title: Assistant General Counsel
Company: Weyerhaeuser Company
Address: 33663 Weyerhaeuser Way S.
Federal Way, WA 98003
Phone: (253) 924-2032
email: rachel.mccall@weyerhaeuser.com

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR Peace College of Raleigh, Inc.
(now William Peace University):

8/10/16

Dated



Name (print): George A. Yearwood
Title: Vice President for Administration &
Chief Financial Officer
Address: 15 E. Peace St., Raleigh, NC 27604


Agent Authorized to Accept Service

Name (print): George A. Yearwood
on Behalf of Above-signed Party: Title:
Vice President for Administration & Chief
Financial Officer
Company: Peace College of Raleigh, Inc.
(now William Peace University)
Address: 15 E. Peace St.
Raleigh, NC 27604
Phone: 919 508 2035
email: ryearwood@peace.edu

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR City of Winston-Salem :
[Print name of Settling Defendant]

August 17, 2016
Dated


Name (print): Lee Garrity
Title: City Manager
Address: P.O. Box 2511
Winston-Salem, NC 27102


Agent Authorized to Accept Service
on Behalf of Above-signed Party:

Name (print): Lee Garrity
Title: City Manager
Company: City of Winston-Salem
Address: P.O. Box 2511
Winston-Salem, NC 27102
Phone: 336-734-1301
email: leeg@cityofws.org

Signature Page for CD regarding the Ward Transformer Superfund Site

FOR WOODSTREAM CORPORATION:
[Print name of Settling Defendant]

July 26, 2016
Dated


Name (print): HARRY E. WHALEY
Title: CEO + PRESIDENT
Address: 69 N LOCUST STREET
LITIZ, PA 17543

Agent Authorized to Accept Service on Behalf of Above-signed Party: Name (print): _____
Title: _____
Company: ET CORPORATION
Address: _____
Phone: _____
email: _____

Appendix A

Sales-Only Cashout Settling Defendants

**APPENDIX A -
SALES-ONLY CASHOUT SETTLING DEFENDANTS**

	NAME	AMOUNT
1	3M Company	\$10,000
2	Adams-Columbia Electric Cooperative	\$10,000
3	Aerojet Rocketdyne Holdings, Inc., formerly named Gencorp, Inc.	\$10,000
4	Air Products and Chemicals, Inc.	\$10,000
5	Alcoa Inc.	\$10,000
6	American Biltrite Inc.	\$10,000
7	Appalachian Power Company	\$10,000
8	Arkema Inc.	\$10,000
9	Augusta State University n/k/a Augusta University	\$10,000
10	Barnes and Powell Electrical Company	\$10,000
11	Bedford Rural Electric Cooperative, Inc.	\$10,000
12	Bedford, Town of	\$10,000
13	Blackstone, Town of VA	\$10,000
14	Brazos Electric Power Cooperative, Inc.	\$10,000
15	Buist Electric	\$10,000
16	Caterpillar Inc.	\$10,000
17	CGX Energy, LLC (f/k/a Cogentrix Energy, LLC, f/k/a Cogentrix Energy, Inc.)	\$10,000
18	Cohen & Green Salvage Company, Inc.	\$10,000
19	Conopco, Inc. f/k/a Unilever	\$10,000
20	Corning Incorporated, formerly known as Corning Glass Works	\$10,000
21	City of Dover	(\$70,000)
22	Duquesne Light Company	\$10,000
23	East Central Regional Hospital, Augusta, Ga.	\$10,000
24	East Kentucky Power Cooperative	\$10,000
25	Entergy Arkansas, Inc., formerly known as Arkansas Power and Light, Inc.	\$10,000
26	Environmental Protection Services, Inc.	(\$70,000)
27	Firelands Electric Cooperative, Inc.	\$10,000
28	Florida Power & Light Company/NextEra	\$10,000
29	FluiDyne Engineering Corp. dba Phoenix Solutions Co.	\$10,000
30	G&S Motor Equipment Co., Inc.	\$10,000
31	General Extrusions, Inc.	\$10,000
32	GGP-TRC, LLC, f/k/a The Rouse Company, LLC	\$10,000
33	Green Mountain Power, Inc.	\$10,000
34	Guernsey-Muskingum Electric Cooperative, Inc.	\$10,000
35	H&K Group, Inc. f/k/a/ Haines & Kibblehouse	\$10,000
36	Hancock Wood Electric Cooperative, Inc.	\$10,000
37	The Hershey Company	\$10,000
38	The Hillshire Brands Company, f/k/a Sara Lee Corporation, including all present and former subsidiaries and affiliates thereof	\$10,000
39	Holladay Property Services Midwest, Inc.	\$10,000

40	Huntsville Utilities	\$10,000
41	Jet Electric Motor Company, Inc.	\$10,000
42	Kelly Electric	\$10,000
43	Kingsport Power Company	\$10,000
44	Kraft Heinz Foods Company, for itself and on behalf of Mondelēz Global LLC	\$10,000
45	Lewis Electric Supply Co., Inc.	\$10,000
46	Mass. Electric Construction Co.	\$10,000
47	MidAmerican Energy Company	\$10,000
48	Niagara Mohawk Power Corporation dba National Grid	\$10,000
49	Occidental Chemical Corporation	\$10,000
50	Phillips 66 Company as successor to ConocoPhillips Company	\$10,000
51	PPL Electric Utilities Corporation	\$10,000
52	Royal Street Junk Company, Inc.	\$10,000
53	Rubbermaid Inc./Newell Brands Inc. (f/k/a Newell Rubbermaid Inc.)	\$10,000
54	The City of San Antonio, acting by and through City Public Service Board (a/k/a CPS Energy)	\$10,000
55	Santee Electric Cooperative, Inc.	\$10,000
56	South Carolina Public Service Authority (Santee Cooper)	\$10,000
57	South Central Power Company	\$10,000
58	Sumter Electric Cooperative, Inc.	\$10,000
59	Sunbelt Transformer, LTD.	\$10,000
60	Timken US LLC	\$10,000
61	Trustees of the University of Pennsylvania	\$10,000
62	United States Steel Corporation	\$10,000
63	Unitil Energy Systems, Inc.	\$10,000
64	Villanova University	\$10,000
65	Virginia Electric & Power Company	\$10,000
66	Warren Electric Cooperative, Inc.	\$10,000
67	Wartburg College	\$10,000
	TOTAL	\$510,000

* Net amount due or refund owed, accounting for prior \$80,000 contribution to OU-1 costs under UAO

† To be paid as initial payment of \$2,500 and subsequent monthly payments of \$2,500 and \$5,000

Appendix B

Cashout Settling Defendants

APPENDIX B - CASHOUT SETTLING DEFENDANTS

	NAME	AMOUNT
1	Alcan Primary Products Corporation	\$15,000
2	Carlisle Construction Materials, LLC, f/k/a Carlisle SynTec Incorporated	\$15,000
3	CHRISTUS Health Northern Louisiana	\$15,000
4	DACCO, Incorporated	\$15,000
5	Duke Energy Progress, LLC f/k/a Carolina Power & Light Company d/b/a Progress Energy Carolinas	\$165,000
6	East Penn Manufacturing Co.	\$15,000
7	Emma L. Bixby Medical Center	\$15,000
8	Erachem Comilog, Inc.	(\$65,000) *
9	IES Commercial, Inc.	\$15,000
10	Imerys Carbonates USA, Inc.	\$15,000
11	J.C. Blair Memorial Hospital	\$15,000
12	Koch Industries	\$15,000
13	LaCrosse Footwear, Inc.	\$15,000
14	Parker Hannifin Corporation	\$15,000
15	Peace College, k/n/a William Peace University	\$15,000
16	Riley Power Inc.	\$15,000
17	Robert Bosch LLC	\$15,000
18	Southern Alloy Corporation	\$15,000
19	Tallahassee Memorial HealthCare, Inc.	\$15,000
20	Transcontinental Gas Pipe Line Company, LLC	\$15,000
21	Tredegear Film Products Corporation	\$15,000
22	Woodstream Corporation	\$15,000
	TOTAL	\$400,000

* Net amount due or refund owed, accounting for prior \$80,000 contribution to OU-1 costs under UAO

Appendix C

Settling Repair Defendants

**APPENDIX C -
SETTLING REPAIR DEFENDANTS**

	NAME	INITIAL NET CONTRIBUTION	TOTAL CONTRIBUTION	ALLOCATION FOR ANY FUTURE OU-1 COSTS (%)
1	Akers National Roll Company (named as National Roll)	(\$44,500) *	\$48,000	0.96386
2	BAE Systems Norfolk Ship Repair Inc.	\$48,000	\$48,000	0.96386
3	Baltimore Gas & Electric Company	\$36,000	\$36,000	0.72289
4	BASF Corporation	\$36,000	\$36,000	0.72289
5	Bayer CropScience, Inc.	\$66,000	\$66,000	1.32530
6	Cape Hatteras Electric Membership Corporation	\$90,000	\$90,000	1.80723
7	Cargill, Incorporated	\$48,000	\$48,000	0.96386
8	Carr & Duff, Inc., for itself and on behalf of Ed Duff	(\$14,500) *	\$78,000	1.56627
9	Cemex Construction Materials Florida, LLC	\$48,000	\$48,000	0.96386
10	Chemical Products Corporation	\$78,000	\$78,000	1.56627
11	Chevron Mining Inc.	\$36,000	\$36,000	0.72289
12	Cleveland Electric Company	\$48,000	\$48,000	0.96386
13	Continental Grain Company	\$36,000	\$36,000	0.72289
14	Cooper Power Systems, n/k/a Eaton Corporation	\$60,000	\$60,000	1.20482
15	Cooper Tire & Rubber Company	\$60,000	\$60,000	1.20482
16	Delaware Electric Cooperative, Inc.	\$102,000	\$102,000	2.04819
17	Donovan Spring Company, Inc. and Donovan Equipment Company, Inc., formerly known as Donovan Spring & Equipment Co., Inc., Donovan Spring & Equipment Co. of N.H., Inc. and Gasification Specialties, Inc.	\$36,000	\$36,000	0.72289
18	Dravo Corp.	\$60,000	\$60,000	1.20482
19	E. I. du Pont de Nemours and Company	\$60,000	\$60,000	1.20482
20	Endicott Clay Products Company	\$60,000	\$60,000	1.20482
21	ExxonMobil Oil Corporation	\$48,000	\$48,000	0.96386
22	Fabri-Kal Corporation	\$66,000	\$66,000	1.32530
23	FMC Corporation	\$48,000	\$48,000	0.96386
24	Four County Electric Membership Corporation	(\$14,500) *	\$78,000	1.56627
25	Frontier Communications Corporation	\$60,000	\$60,000	1.20482
26	Furman University	\$66,000	\$66,000	1.32530
27	General Electric Company (named as RCA, n/k/a General Electric Company)	(\$56,500) *	\$36,000	0.72289
28	Georgia-Pacific LLC	\$66,000	\$66,000	1.32530
29	GrafTech International Holdings Inc., formerly known as UCAR Carbon Company Inc.	\$66,000	\$66,000	1.32530
30	Grand Haven Board of Light and Power	\$36,000	\$36,000	0.72289
31	Green Circle Growers, Inc.	\$48,000	\$48,000	0.96386
32	Greenwood Mills, Inc.	\$36,000 †	\$36,000	0.72289
33	Guam Power Authority	\$36,000	\$36,000	0.72289
34	Harsco Corp., f/k/a Multiserve North America f/k/a Heckett	\$48,000	\$48,000	0.96386
35	Haynes International, Inc.	\$36,000	\$36,000	0.72289
36	Hercules Incorporated	\$48,000	\$48,000	0.96386
37	Honeywell	\$66,000	\$66,000	1.32530
38	Hudson Light and Power Department	\$48,000	\$48,000	0.96386
39	Huntington Ingalls Inc., f/k/a Northrup Grumman Shipbuilding, Inc.	\$36,000	\$36,000	0.72289
40	Imerys Fused Minerals Greeneville, Inc.	(\$14,500) *	\$78,000	1.56627
41	International Paper Company	\$90,000	\$90,000	1.80723
42	Intertape Polymer Group, Inc.	\$48,000	\$48,000	0.96386
43	Jessop Steel, LLC	\$48,000	\$48,000	0.96386
44	Lafarge Mid-Atlantic, LLC	\$48,000	\$48,000	0.96386
45	Town of Louisburg	\$66,000	\$66,000	1.32530
46	Martin Marietta Materials, Inc.	\$102,000	\$102,000	2.04819
47	Mid-Valley Pipeline Company	\$60,000	\$60,000	1.20482
48	Mittal Steel USA-Lancashire Coal Inc.	\$48,000	\$48,000	0.96386
49	City of Monroe	\$66,000	\$66,000	1.32530
50	The National Lime and Stone Company	\$60,000	\$60,000	1.20482
51	National Railroad Passenger Corporation ("Amtrak")	\$66,000	\$66,000	1.32530
53	New Hampshire Insurance Company	\$48,000	\$48,000	0.96386
54	Norfolk Southern Railway Company	\$48,000	\$48,000	0.96386
55	North Carolina Department of Agriculture and Consumer Services a/k/a North Carolina State Fair	\$102,000	\$102,000	2.04819
56	North Carolina Department of Health and Human Services	\$90,000	\$90,000	1.80723

57	The North Carolina Granite Corporation	\$48,000		\$48,000	0.96386
	North Carolina State University	\$60,000		\$60,000	1.20482
58	North Georgia Electric Membership Corporation	\$111,500	*	\$204,000	4.09639
59	Novartis Corporation	\$48,000		\$48,000	0.96386
60	Nucor Corporation	\$60,000		\$60,000	1.20482
61	Orbital ATK, Inc. f/k/a Alliant Techsystems, Inc. (ATK Launch Systems Inc.)	\$78,000		\$78,000	1.56627
62	Owen Electric Steel Company of South Carolina	(\$32,500)	*	\$60,000	1.20482
63	Palmetto Electric Cooperative, Inc.	\$48,000		\$48,000	0.96386
64	City of Philadelphia	\$66,000		\$66,000	1.32530
65	City of Radford, Virginia	\$36,000		\$36,000	0.72289
66	Residual Enterprises Corporation, f/d/b/a CSX Residual Company	\$60,000		\$60,000	1.20482
67	Roanoke Electric Steel Corporation	\$66,000		\$66,000	1.32530
68	Rutherford Electric Membership Corporation	\$66,000		\$66,000	1.32530
69	Seabrook Enterprises, Inc.	\$48,000		\$48,000	0.96386
70	Shieldalloy Metallurgical Corporation	\$60,000		\$60,000	1.20482
71	Southern Maryland Electric Cooperative, Inc.	(\$32,500)	*	\$60,000	1.20482
72	Town of Tarboro	\$48,000		\$48,000	0.96386
73	Trap Rock Industries, Inc.	\$48,000		\$48,000	0.96386
74	Trinity Industries, Inc.	\$48,000		\$48,000	0.96386
75	Union Carbide Corporation	(\$2,500)	*	\$90,000	1.80723
76	United States Pipe and Foundry Company, LLC	\$48,000		\$48,000	0.96386
77	The University of North Carolina at Chapel Hill	\$87,500	*	\$180,000	3.61446
78	Veolia Environmental Services North America LLC for itself and as otherwise indicated on the signature block	\$66,000		\$66,000	1.32530
79	Vulcan Construction Materials, LLC	\$78,000		\$78,000	1.56627
80	Weyerhaeuser Company	\$66,000		\$66,000	1.32530
81	City of Winston-Salem	\$66,000		\$66,000	1.32530
		\$4,055,000		\$4,980,000	100.00000

* Net amount due or refund owed, accounting for prior \$92,500 contribution to OU-1 costs under UAO.

† To be paid as initial payment of \$9,000 and three subsequent quarterly installments of \$9,000

Appendix D

UAO Parties

Appendix D

UAO Parties

1. City of Dover
2. Environmental Protection Services, Inc.
3. Four County Electric Membership Corporation
4. Akers National Roll Company (named as National Roll)
5. North Georgia Electric Membership Corporation
6. Owen Electric Steel Company of South Carolina
7. Southern Maryland Electric Cooperative, Inc.
8. Imerys Fused Minerals Greeneville, Inc. (f/k/a Tennessee Electro Minerals, Inc.)
9. The University of North Carolina at Chapel Hill
10. Union Carbide Corporation
11. General Electric Company
12. Erachem Comilog, Inc.
13. Carr & Duff, Inc.
14. G&S Motor Equipment Co., Inc.
15. Virginia Electric and Power Company

Appendix E

Site Map



The Ward Transformer Site is located near the Raleigh-Durham International Airport (RDU) in the city of Raleigh, North Carolina in a predominantly industrial area.

- Reach B
- Reach C
- Reach D
- Lower Crabtree Creek
- Lower Brier Creek
- Approximate Boundary - Operable Unit 2

August 6, 2013

Site Map

Ward Transformer
Raleigh, NC

Appendix
E

Appendix F

OU1 Record of Decision

APPENDIX F

RECORD OF DECISION

WARD TRANSFORMER SUPERFUND SITE
Operable Unit 1

Raleigh, Wake County
North Carolina



U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA, GEORGIA
September 2008



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**DECLARATION FOR THE RECORD OF DECISION
FOR THE WARD TRANSFORMER SUPERFUND SITE**

SITE NAME AND LOCATION

Ward Transformer Superfund Site,
Raleigh, Wake County, North Carolina
Site Identification Number – NCD 003 202 603

STATEMENT OF BASIS AND PURPOSE

This decision document presents the Selected Remedy for the Ward Transformer Superfund Site (Site), Operable Unit 1 in Raleigh, Wake County, North Carolina, which was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the Administrative Record file for this Site.

The State of North Carolina concurs with the Selected Remedy.

ASSESSMENT OF THE SITE

The response action selected in this Record of Decision (ROD) for Operable Unit 1 (OU1) is necessary to protect the public health or welfare, or the environment from actual or threatened releases of hazardous substances, pollutants, or contaminants from this Site which may present an imminent and substantial endangerment to public health or welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The Selected Remedy is: Excavation and Off-Site Disposal of sediments and flood plain soil from Reaches B, C, and D, and Lower Brier Creek; Monitored Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek; and Institutional Controls. The Selected Remedy includes:

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Implement educational and community outreach programs.
- Conduct pre-excavation sampling of sediment and floodplain soil.
- Conduct a pre-excavation endangered mussel evaluation study.
- Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.
- Restore site and stream to pre-remediation conditions.

- Implement Monitor Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.
- Conduct periodic monitoring of sediment and aquatic biota.
- Implement Institutional Controls.
- Conduct Five-year reviews.

STATUTORY DETERMINATIONS

The Selected Remedy is protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

The remedy selected for this operable unit does not satisfy the statutory preference for treatment as a principal element of the remedy because of the relatively low PCB levels in areas requiring excavation and because the remedy relies on naturally occurring processes to reduce toxicity, mobility, or volume of the contaminants in other areas. In addition, the principal threat waste at the Site is being addressed through a separate time critical removal action using thermal desorption treatment.

This remedy will not result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, however, since it may take more than five years to attain levels that allow for unlimited use and unrestricted exposure a policy review will be conducted within five years of construction completion for the Site to ensure that the Selected Remedy is, protective of human health and the environment.

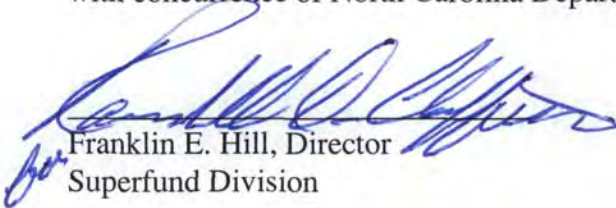
ROD DATA CERTIFICATION CHECKLIST

1	Chemicals of Concern and Their Respective Concentrations	Section 8.1.1
2	Baseline Risk Represented by the Chemicals of Concern	Section 8.1.4.1
3	Cleanup Levels Established for Chemicals of Concern and the Basis for the Levels	Section 9.1
4	Current and Future Land and Groundwater Use Assumptions Used in the Baseline Risk Assessment and the Record of Decision	Section 7.0
5	Land Use that Will be Available at the Site as a Result of the Selected Remedy	Section 13
6	Estimated Capital, Operation and Maintenance, and Total Present Worth Costs; Discount Rate; and the Number of Years Over Which the Remedy Cost Estimates are Projected	Section 13

7	Decisive Factors that Led to Selecting the Remedy	Sections 11 & 13
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AUTHORIZING SIGNATURE

This Record of Decision documents the Selected Remedy for Operable Unit 1 at the Ward Transformer Superfund Site. This remedy was selected by the Environmental Protection Agency with concurrence of North Carolina Department of Environment and Natural Resources.


Franklin E. Hill, Director
Superfund Division

9-29-08
Date

**DECISION SUMMARY
FOR THE
RECORD OF DECISION**

**WARD TRANSFORMER SUPERFUND SITE
Operable Unit 1**

Raleigh, Wake County
North Carolina



U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA, GEORGIA
September 2008

**RECORD OF DECISION
FOR THE WARD TRANSFORMER SUPERFUND SITE
DECISION SUMMARY**

1.0 SITE NAME, LOCATION, AND DESCRIPTION

The Ward Transformer Superfund Site (NCD 003 202 603) is located along Mount Herman Road, in a predominantly industrial area of northwestern Raleigh, Wake County, North Carolina. The Ward Transformer facility was built on approximately 11 acres of previously undeveloped land in 1964. As part of its operations, the Ward Transformer facility built, repaired, sold, and reconditioned transformers, switchgear, and other similar types of electrical equipment at the Site until 2006.

An EPA-lead phased remedial investigation was conducted from April 2003 to April 2007. As part of the investigation, soil, sediment, surface water, groundwater, and fish samples were collected. The investigation included the facility property and surrounding properties, together with more than 30 miles of waterways including unnamed tributaries to Little Brier Creek (Reach A, B and C), Little Brier Creek (Reach D), Brier Creek Reservoir, Brier Creek, Lake Crabtree and certain tributaries, Crabtree Creek and certain tributaries, and a 0.5 mile segment of the Neuse River (Figure 1).

In September 2005, EPA signed an Administrative Settlement Agreement and Order on Consent with a group of potentially responsible parties (PRPs) to implement a time critical removal action. The removal action is underway and includes contaminated soil/sediment removal at the Ward Transformer facility and some immediate surrounding areas, including Reach A.

Operable Unit 1, the subject of this ROD includes Reaches B, C, and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and Crabtree Creek. These areas are all downgradient from Reach A and the Ward Transformer facility.

The USEPA has the enforcement lead at the Site, with support from the North Carolina Department of Environment and Natural Resources (NC DENR). The USEPA plans to negotiate a Consent Decree with responsible parties to conduct and pay for the implementation of the remedy described in this ROD.

2.0 SITE HISTORY

The Ward Transformer facility is owned by Ward Transformer Company, Inc., and operated by Ward Transformer Sales and Service, Inc. (collectively "Ward") and was built on approximately 11 acres of previously undeveloped land in 1964. As part of its operations, Ward built, repaired, sold, and reconditioned transformers, switchgear, and other similar types of electrical equipment at the Site until 2006. As a result of Ward's operations, polychlorinated biphenyls (PCBs) were released into the environment.

The Ward Transformer Superfund Site was proposed for the National Priority List (NPL) on September 5, 2002, and was finalized on the NPL on April 30, 2003. EPA conducted a phased remedial investigation from April 2003 to April 2007. As part of the investigation, soil, sediment, surface water, groundwater, and fish samples were collected. The investigation covered the facility property and surrounding properties, together with more than 30 miles of waterways including unnamed tributaries to Little Brier Creek (Reach A, B and C), Little Brier Creek (Reach D), Brier Creek Reservoir, Brier Creek, Lake Crabtree and some tributaries, Crabtree Creek and some tributaries, and a 0.5 mile segment of the Neuse River (Figure 1).

As part of its investigation of the Site, EPA has conducted numerous enforcement-related activities including:

- On July 3, 2002, EPA sent Ward Transformer Company, Inc., an Information Request Letter pursuant to Section 104 of CERCLA seeking information as part of its investigation of the Site.
- On August 29, 2002, EPA sent Ward Transformer Company, Inc, a General Notice Letter notifying Ward of its potential liability for the release or threatened release of hazardous substances at the Site.
- In November 2003 and February 2004, EPA sent several hundred companies Information Request Letters based on information received from Ward that the companies may have conducted business with, or sent hazardous materials to, the Site.
- On September 14, 2004, EPA prepared and signed an Action Memorandum supporting EPA's decision to implement a time-critical removal at the Site.
- On October 20, 2004, EPA sent Notice/Demand letters and draft Administrative Orders on Consent (AOCs) to 43 Potentially Responsible Parties (PRPs) notifying them of their potential liability, and providing them 60 days in which to enter into an agreement to conduct or finance a time-critical removal action at the Site, pursuant to the Action Memorandum, and to reimburse EPA for its costs incurred to date. On November 8, 2004, EPA sent a fifth owner/operator PRP a Notice/Demand letter and draft AOCs. The PRPs included 39 top-volume generator PRPs as well as four owner/operator PRPs. On December 22, 2004, the negotiation period officially ended. EPA was unable to reach a settlement agreement with the PRPs for the performance of a time-critical removal action and the reimbursement of EPA's costs.
- Between February 2005 and September 2005, EPA negotiated with a group of owner/operator PRPs and generator PRPs for the performance of a time-critical removal action at the Site and the reimbursement of EPA's costs.

- On September 16, 2005, EPA entered into a DOJ-approved Administrative Settlement Agreement and Order on Consent (Settlement Agreement) with nine PRPs for the performance of a time-critical removal action at the Ward Transformer facility and some immediately surrounding areas and the reimbursement of \$725,440.83 in past response costs.
- On April 21, 2006, EPA was notified that Ward had made a decision to permanently discontinue the manufacture, repair or inventory storage of all oil-filled transformers at the Ward Transformer facility or the adjacent warehouse property.
- On June 2006, the PRPs' contractor mobilized to the Site to begin implementation of the time-critical removal action. The removal action is underway and includes contaminated soil/sediment removal from the Ward Transformer facility and some immediate surrounding areas, including Reach A followed by treatment and off-site disposal, as appropriate.

3.0 COMMUNITY PARTICIPATION

The Ward Transformer Superfund Site was included on the National Priorities List (NPL) or Superfund list in April 2003. Since 2003, EPA has conducted extensive community relations activities to inform and involve the community about Site activities. Community relations activities conducted include mailing information fact sheets and e-mails, press releases, availability sessions, sampling plan development meeting, presentations, and public meetings.

Table 1 presents a summary of community meetings conducted in Raleigh, North Carolina.

Table 1 – Community Participation

EVENT	DATE
Remedial Investigation (RI) “ Kick-off” Public meeting	March 13, 2003
RI findings meeting	November 16, 2004
Task Force Presentation	August 4, 2005
Sampling Plan Development meeting	October 27, 2005
Public Availability Session	January 19, 2006
Public Meeting	June 21, 2006
Public Availability Session	March 17, 2007
Proposed Plan Public Meeting for OU1	August 14, 2007

The OU1 RI/FS report and Proposed Plan for the Ward Transformer Superfund Site were made available to the public in August 2007. They can be found in the Administrative Record file and the information repository maintained at the EPA Docket Room located at EPA Region 4 in

Atlanta, Georgia, and at the North Regional Public Library in Raleigh, North Carolina. The notice of availability of these two documents was published in the Durham Herald on August 6, 2007, and the Raleigh News and Observer on August 8, 2007. A public comment period was held from August 6, 2007, to September 4, 2007. An extension to the public comment period was requested. As a result, the public comment period was extended to October 4, 2007. In addition, a public meeting was held on August 14, 2007, to present the proposed plan to a broader community audience than those that had already been involved at the Site. At this meeting, representatives from the EPA and the NC DENR answered questions about the Site and the remedial alternatives. EPA's response to the comments received during this period is included in the Responsiveness Summary, which is part of this Record of Decision.

4.0 SCOPE AND ROLE OF OPERABLE UNIT 1 (OU1)

As with many Superfund Sites, the problems at the Ward Transformer Superfund Site are complex. The contamination at the Site is being addressed through an on-going time critical removal action and future remedial actions. EPA has organized the remedial work into two operable units. OU 1 is the subject of this ROD, and OU 2 will be the subject of a future ROD.

On-going Time Critical Removal Action:

On June 2007 the contractor for the potentially responsible parties (PRPs) mobilized to the Site to initiate a removal action that addresses the main source of PCB contamination. The removal action includes excavation and removal of contaminated soil and sediment from the Ward Transformer Facility and immediate surrounding areas including Reach A. The on-going removal action is scheduled to be completed in 2009. When completed, it is estimated that more than 150,000 tons of contaminated material would be addressed either by on-site Low Temperature Thermal Desorption (LTTD) treatment or off-site disposal, as appropriate.

Future Remedial Actions:

Operable Unit 1(OU1)

OU 1 is the subject of this ROD and addresses soil, sediment, surface water and fish on areas downgradient from the Ward Transformer facility including Reaches B, C and D; Brier Creek Reservoir; Lake Crabtree; and Lower Crabtree Creek. (Figure 1)

Operable Unit 2 (OU2)

Is a future ROD that will include the final remedy for all media; at the Ward Transformer facility, certain parcels adjacent to the facility, and nearby drainage pathways upgradient of Reach B.

5.0 SITE CHARACTERISTICS

5.1 Site Settings

The Ward Transformer facility was built on approximately 11 acres of previously undeveloped land in 1964. As part of its operations, Ward built, repaired, sold, and reconditioned transformers, switchgear, and other similar types of electrical equipment at the Site until 2006. The Ward Transformer facility operations included the main building, where transformers were handled and offices were located, the transformer storage yard, a storm-water management lagoon, and a building housing a storm-water treatment plant (SWTP) system. Treated effluent from the SWTP was discharged to a National Pollutant Discharge Elimination System (NPDES)-permitted outfall on an unnamed tributary to Little Brier Creek (Reach A), located west of the lagoon area (Figure 2). The northern portion of the Site, a warehouse that was formerly part of the Ward operations, was later leased to Horizon Forest Products (Horizon) circa 1976 to 2002, a lumber supply business and is now vacant.

The Ward Transformer facility is located 600 feet (ft) south-southeast of the Northern Wake Expressway/Interstate-540 (I-540), 1,000 ft southwest of US highway 70, and is adjacent to property owned by the Raleigh-Durham International (RDU) Airport. The RDU Airport proper (i.e., terminals) is located approximately 2 miles south of the Site, with airport runways located less than 1 mile south. Estes Transport Co., a trucking company, leases the property to the south (Figure 3). Across Mount Herman Road from the facility is Triangle Coatings where plastic and metal parts are painted. Visara International, Inc. is also across Mount Herman Road.

5.2 Climate

The Raleigh-Durham area receives an average of 42.5 inches of precipitation annually, based on measurements collected at RDU Airport between 1948 and 2005. Rainfall is well distributed throughout the year. July (4.6 inches) and August (4.5 inches) have the greatest amount of rainfall, and October (3.0 inches) and November (2.9 inches) the least. Soil moisture is sometimes low during spring and summer due to gaps between rain events rather than from a shortage of total rainfall, but occasionally the accumulated total during the growing season falls short of plant needs. Most summer rain is produced by thunderstorms, which may occasionally be accompanied by strong winds, intense rains, and hail. Tropical storm systems periodically impact the Raleigh-Durham area, with the largest storms producing 4 to 5.6 inches of rainfall in a 24-hour period. Storms of this nature typically result in flash flooding in the Crabtree Creek watershed. However, the Raleigh-Durham area is far enough from the coast such that the severe weather effects of coastal storms are reduced. While snow and sleet usually occur each year, significant accumulations of snow are rare.

5.3 Local Soils

The soil descriptions and maps in the U.S. Department of Agriculture (USDA) Soil Conservation

Service (SCS) Soil Survey for Wake County, NC (SCS, 1970) were reviewed. The following narrative summarizes characteristics of soils occurring within areas potentially impacted by releases from the Ward Transformer Superfund Site. Soils within the vicinity of the Site and the riparian area associated with the watershed below the facility are described by the Chewacla and Congaree soil series.

Soils in Reaches B and C are described as soils from the Chewacla series of 0 to 2% slopes. This soil consists of nearly level, poorly drained soils on the floodplain. It is formed from alluvial deposits of fine loamy material. Fertility and organic material are low and permeability is moderately rapid. It has a seasonally high water table and frequent flooding occurs for brief periods of time.

Throughout the lower portion of the study area, encompassing Little Brier Creek through Brier Creek Reservoir down to Lake Crabtree, Chewacla soils occur with Congaree soils. Congaree soils have a higher rate of permeability and tend to be better drained. Soils of the Congaree series consist of nearly level, well-drained soils on the floodplains. Typically, they have a brown to dark-brown surface layer that is 4 to 12 inches thick. Beneath the surface layer, the soil material is silt loam that ranges from brown to dark brown in color and from 30 to 108 inches in total thickness. Like the Chewacla series, these soils have a seasonally high water table, low organic matter and fertility, and permeability is moderately rapid. These soils are also subject to frequent flooding for brief periods of time.

5.4 Surface Water

The Ward Transformer facility is located in the Crabtree Creek drainage basin, a subbasin of the 2,405-square mile (mi²) Upper Neuse Basin (hydrologic unit code [HUC] No. 03020201). The Upper Neuse Basin is a subbasin of the 6,234-mi² Neuse River Basin. The headwaters of the Neuse River originate at the confluence of the Eno and Flat Rivers, northwest of Durham, and feed into Falls of the Neuse Lake (Falls Lake Reservoir), which was created by the construction of Falls Lake dam in 1983. After this impounded 22-mile beginning, the Neuse River flows freely as a freshwater river until it reaches New Bern, North Carolina. In the vicinity of New Bern, the river turns brackish, widens, and travels sluggishly as it becomes a 40-mile-long tidal estuary that empties into the southern end of Pamlico Sound.

The Ward Transformer facility is located on a topographic high and on the edge of the local watershed. The facility is located outside the 500-year floodplain. In general, the topography of the property slopes to the west-southwest. Prior to 1972, all runoff from the Ward Transformer facility flowed overland or was carried in drainage ditches to intermittent streams located west and southwest of the facility. One of the streams receiving runoff from the facility included an unnamed tributary to Little Brier Creek (Reach A), located west of the on-site lagoons. Some of the facility's runoff also entered a drainage ditch located along the northern side of the property, adjacent to the transformer storage yard. This drainage ditch conveyed runoff westerly and generally followed a dirt road located west of the facility. Some runoff from the facility may have

also flowed overland northwesterly into an intermittent stream, which also flowed to the west. In 1971, two lagoons were created on the southern portion of the Ward property for retention of stormwater runoff. The upper lagoon had a pipe from the bottom that drained to the lower lagoon. The lower lagoon then had a pipe from the bottom that drained to the unnamed tributary to Little Brier Creek located west of the lagoons (Reach A).

Around 1979, a concrete curb was built around the perimeter of the facility pad for the purpose of directing all stormwater runoff into the on-site lagoons. At approximately the same time, the storm water treatment plant (SWTP) system was installed in a building located north of the lagoons. Runoff collected in the pond was pumped to the SWTP for treatment prior to discharge via the NPDES-permitted outfall located at the beginning of Reach A. No detectable concentrations of PCBs were allowed in the treated effluent. Effluent was also monitored for total chloride, total iron, total fluoride, total phosphorus, total nitrogen, and oil and grease.

From the SWTP outfall, surface water flows west-southwesterly via the unnamed tributary to Little Brier Creek for approximately 2,100 ft (0.4 mile) before entering the first culvert beneath the first I-540 crossing. This section of the downstream surface water pathway will hereafter be referred to as Reach A in this report. Upon exiting the culvert on the west side of I-540, the unnamed tributary to Little Brier Creek continues to flow west-southwesterly for approximately 1,500 ft (0.3 mile) before entering a culvert beneath the Lumley Road crossing. Several tributaries feed into this portion of the unnamed tributary to Little Brier Creek. This section of the downstream surface water pathway will hereafter be referred to as Reach B. From the terminus of Reach B, the unnamed tributary to Little Brier Creek conveys surface water south-southwesterly for approximately 2,100 ft (0.4 mile) to its confluence with Little Brier Creek proper and a culvert beneath the second I-540 crossing. This section of the downstream surface water pathway will hereafter be referred to as Reach C. From the culvert beneath the second I-540 crossing, Little Brier Creek flows southerly for approximately 4,200 ft (0.8 mile) to its mouth on Brier Creek Reservoir, located in the vicinity of the culverts beneath the Globe Road crossing. This section of the downstream surface water pathway will hereafter be referred to as Reach D.

From Little Brier Creek's mouth, Brier Creek Reservoir carries surface water southerly for approximately 1.7 miles, flowing through culverts at Globe Road, Nelson Road, and Aviation Parkway to the reservoir's dam. Brier Creek Reservoir is not used as a source for drinking water; it is one of several impoundments in the Crabtree Creek drainage basin constructed primarily for flood control. Brier Creek Reservoir covers an area of approximately 150 acres during normal (not flood stage) conditions. Brier Creek Reservoir Dam was completed in 1985. In addition to Little Brier Creek, Brier Creek is a tributary of Brier Creek Reservoir.

From the Brier Creek Reservoir Dam, surface water is discharged through an outlet structure to lower Brier Creek, which flows southerly for approximately 1.8 miles, flowing through culverts at Airport Boulevard and I-40, to its mouth on Lake Crabtree, an impoundment structure constructed in 1988 primarily for flood control. Lake Crabtree currently covers an area of

approximately 460 acres under normal conditions. Figure 4 illustrates the locations of Reaches A through D, as well as water bodies located farther downstream, discussed above.

Additional tributaries to Lake Crabtree include Stirrup Iron Creek, Crabtree Creek, Haley's Branch, and Black Creek, which drains portions of Cary, Morrisville, and the RDU Airport. From Brier Creek's mouth, Lake Crabtree conveys surface water flow easterly, through a culvert at Aviation Parkway, to the lake's dam and an outlet structure. Water is discharged through the outlet structure to lower Crabtree Creek, which in turn flows east-southeasterly for approximately 11 miles before spilling over the Lassiter Mill Dam, a former mill pond dam constructed in the early 1900s. The Lassiter Mill Dam is approximately 7 ft high and 200 ft wide. From the Lassiter Mill Dam spillway, Crabtree Creek continues to flow southeasterly for approximately 10.5 miles before discharging into the Neuse River north of Poole Road. Tributaries to Crabtree Creek between Lake Crabtree and the Neuse River include Reedy Creek, Sycamore Creek, Turkey Creek, Haresnipe Creek, Richland Creek, Mine Creek, Beaverdam Creek, Big Branch, Pigeon House, and Marsh Creek. (Figure 1)

Table 2 summarizes the surface water bodies located downstream of the Ward Transformer facility included in the RI/FS study area for OU1.

Table 2 - Downstream Surface Water Bodies

SURFACE WATER BODY		LENGTH OF REACH (MILES)
Unnamed Tributary to Little Brier Creek	Reach A	0.4
	Reach B	0.3
	Reach C	0.4
Little Brier Creek proper	Reach D	0.8
Brier Creek Reservoir		1.7
Brier Creek		1.8
Lake Crabtree Tributaries include Stirrup Iron Creek, Upper Crabtree Creek, Black Creek, and Haleys Branch		1.5
Crabtree Creek (entire watershed) Tributaries include Reedy Creek, Sycamore Creek, Turkey Creek, Haresnipe Creek, Richland Creek, Mine Creek, Beaverdam Creek, Big Branch, Pigeon House, and Marsh Creek		21.5
Neuse River		230*

*From its confluence with Crabtree Creek, the Neuse River flows southeasterly for approximately 230 miles to its mouth on Pamlico Sound. The downstream study area included an approximate 0.5-mile length of reach of the Neuse River. This length of reach included the Neuse River at its confluence with Crabtree Creek to approximately 0.5 mile downstream.

In general, the RI/FS downstream study area terminus was located in the Neuse River, approximately 0.5 mile downstream of Crabtree Creek's mouth. Figure 1 shows the downstream study area from the Ward Transformer facility to the Neuse River. Municipalities located along the downstream study area include the City of Raleigh and the Towns of Morrisville and Cary.

Little Brier Creek, Brier Creek Reservoir, and Brier Creek are designated by NC DENR as Class C waterways for the entire length of these reaches. Class C waterways are protected for secondary recreation, fishing, wildlife, fish and aquatic life propagation and survival, agriculture, and other uses. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner. Lake Crabtree and Crabtree Creek to its confluence with Richland Creek (approximately 3 miles downstream of Lake Crabtree) are designated as Class B waterways.

Class B waterways are used for primary recreation and other uses suitable for Class C. Primary recreational activities include swimming, skin diving, water skiing, and similar uses involving human body contact with water where such activities take place in an organized manner or on a frequent basis. Downstream from the mouth of Richland Creek, Crabtree Creek and the 0.5-mile portion of the Neuse River are designated as Class C waterways. All downstream surface water bodies from the Ward Transformer facility are further designated as nutrient sensitive waters (NSW). This classification is intended for waters needing additional nutrient management due to their being subject to excessive growth of microscopic or macroscopic vegetation.

The unnamed tributary to Little Brier Creek originates at the facility and descends through moderate to steep topography into Little Brier Creek proper. Relatively little sediment deposition occurs along these reaches. The water in these reaches is turbid, primarily as a result of the area's soil and geology, although a significant amount of suburban development is occurring in the Little Brier Creek watershed, which is likely contributing to the sediment load in these reaches. Approaching Brier Creek Reservoir, Little Brier Creek loses energy and flow changes from a river environment to a lake environment. As the transition from river to lake occurs, energy gradients, bottom shear stresses, and turbulence levels all decrease, resulting in high rates of sediment deposition. This is evident by the occurrence of sand and silt deltas forming in the area of Little Brier Creek's mouth. Brier Creek Reservoir is also exhibiting sediment deposition in the vicinity of its dam structure. At the time of construction, Brier Creek Reservoir had a maximum depth of 16.5 ft under normal conditions, a flood stage area of 385 acres, and total flood storage of 3,190 acre-ft. However, since that time, sediment accumulation has occurred. Depth of water in Brier Creek Reservoir was 4 feet, 6 feet, and 3 feet, as measured during the RI at three different locations.

From Brier Creek Reservoir, the energy and flow change from a lake to a river environment again, as lower Brier Creek carries surface water toward Lake Crabtree. Upon entering Lake Crabtree, however, the flow environment again changes from a river to a lake, and sedimentation rates increase in the vicinity of lower Brier Creek's mouth. This area is characterized by very shallow water and fine sediments. The water continues to have a distinctly muddy appearance.

Several additional tributaries, including Stirrup Iron Creek, feed into this portion of Lake Crabtree.

At the time of construction, Lake Crabtree had a maximum depth of 16 ft at normal pool, a flood stage area of 1,114 acres, and total flood storage of 6,915 acre-ft (Woodruff, 2006). However, since that time, sediment accumulation has occurred. More recent measurements reveal Lake Crabtree has an average depth of 6.5 ft with a maximum depth of approximately 13 ft. In several areas of the lake, especially in the area of the lake's tributaries and upstream of the lake's dam structure, large amounts of sediment deposition can be observed. The sediment loading to the lake is likely attributable to the substantial suburban development occurring in the Lake Crabtree watershed.

During normal operations and considering an average rainfall event, up to 83% and 95% of the total suspended solids (TSS) that enter Lake Crabtree and Brier Creek Reservoir, respectively, settle out as sediments during the time it takes for the surface water to circulate through the impoundments (City of Raleigh).

The geomorphology of the downstream reaches changes significantly with distance from the Ward Transformer facility. The beginning of Reach A near the facility has a bank full width of 2 ft and a bank full depth of approximately 0.5 ft. Approximately 21 miles downstream of the facility along Crabtree Creek at Route 1, the bank full width is 56 ft and the bank full depth is 4.5 ft (CH2MHill, 2001, revised 2002).

6.0 NATURE AND EXTENT OF CONTAMINATION

This section presents a summary of the OU1 Remedial Investigation (RI) conducted at the Site. The RI report presents more details of the investigation and results. The RI report is part of the administrative record for the Site.

6.1 Main Source of PCB Contamination

The main source of contamination is located at the Ward Transformer facility and on some of the immediate surrounding properties including Reach A. This source is being addressed under a PRP lead time-critical removal action. This action includes a combination of soil/sediment excavation follow by on-site treatment using a Low Temperature Thermal desorption process, or off-site disposal, as appropriate. Analytical data collected as part of the removal action activities show that some of these areas contain the highest levels of PCBs detected in soil (13,000 mg/kg in subsurface soil).

Because these areas are being addressed under a separate action and agreement, they are not part of OU1, and therefore, are not discussed in much detail in this ROD.

6.2 Groundwater

Groundwater at the Ward Transformer facility occurs in fractured bedrock at approximately 5 to 7 ft below ground surface (bgs) in some areas. The groundwater beneath the facility flows predominantly to the west with some localized flow to the northwest and southwest following the site topography. Groundwater in the area generally discharges to local streams, so the facility groundwater most likely moves westward and discharges into the unnamed tributary to Little Brier Creek.

No drinking water supply surface water intakes are located along the creeks or the Neuse River in the downstream study area. The nearest public drinking water supply surface water intake is located on the Neuse River, approximately 50 miles downstream of the Ward Transformer facility, and operated by the Johnston County Water System. According to Johnston County Water System officials, PCBs have not been detected in any drinking water samples collected at the water treatment plant since the facility began operating in 1996.

The primary water supply for Raleigh is Falls Lake, which is a surface water reservoir in the Neuse River above the Crabtree Creek watershed. Similarly, the City of Durham is primarily served by surface water intakes on Lake Michie and the Little River Reservoir, and the Town of Cary and Town of Morrisville are served by a surface water intake on the B. Everett Jordan Reservoir, more commonly known as Jordan Lake. None of these surface water bodies are located downstream of the Ward Transformer facility.

The nearest groundwater public water system (PWS) to the Ward Transformer facility consists of five groundwater wells (Well Nos. 1, 2, 3, 5, and 6) operated by the Angus Barn (a restaurant), located approximately 0.5 miles east of the facility in the Sycamore Creek watershed. No additional groundwater public water systems are located within a 1.0-mile radius of the Ward Transformer facility. The nearest community water system utilizing a groundwater source is the Country Ridge subdivision, located approximately 2.8 miles east-southeast of the facility. The nearest transient, non-community groundwater drinking water system is the Bass Brothers/Triangle Golf Center, located approximately 1.5 miles northeast of the Ward Transformer facility.

All of these water systems are upgradient of the Ward Transformer facility (where the groundwater flows to the west-southwest) and outside the Little Brier Creek watershed. No public drinking water supply wells were located downgradient (west-southwest) of the facility within a 4-mile radius.

Based on information from the Wake County Environmental Services and NC DENR's Groundwater Protection Unit, as well as a review of land use and zoning records, no private drinking water supply wells are located within 1.0-mile downgradient (west-southwest) of the Ward Transformer facility.

As part of the investigation groundwater monitoring wells were installed on site and sampled. Additional information is needed before remedial alternatives can be developed and a remedy is proposed. The additional groundwater work will be conducted as part of OU2. Therefore this OU1 ROD does not discuss groundwater any further.

6.3 Surface Water

The following subsections describe the various surface water sampling activities that were conducted as part of the investigation.

6.3.1 Surface Water Investigation

In May 2003, a surface water investigation was conducted in the unnamed tributary to Little Brier Creek to determine if site contaminants have impacted the local surface water quality. Surface water sampling was conducted in the unnamed tributary to Little Brier Creek from the Ward Transformer facility's stormwater lagoon outfall to the confluence of Little Brier Creek proper (Reaches A, B, and C).

In December 2005, additional surface water samples were collected from the unnamed tributary to Little Brier Creek between the stormwater lagoon outfall and Northern Wake Expressway/I-540 (Reach A) to confirm previous (i.e., May 2003) surface water sampling results and further characterize potential human health and ecological risk associated with site-related contaminants.

In February 2006, in response to concerns expressed by the local community/stakeholders, surface water samples were collected from Lake Crabtree to refine the estimated extent and magnitude of site-related contaminants

6.3.2 Surface Water - Results Summary

Downstream sampling results indicated PCB contamination, specifically Aroclor 1260, at several locations in Reach A, immediately downstream of the Ward Transformer facility, at concentrations exceeding the NC DENR Surface Water Quality Standard (SWQS) human health and aquatic life standards. The highest concentration of PCB Aroclor 1260 (0.0015 mg/L) was detected just below the SWTP's outfall where the treated stormwater lagoon water is discharged into Reach A of the unnamed tributary to Little Brier Creek. However, no PCB Aroclors or congeners were detected in surface water samples collected from Reach B or any other locations further downstream, including Lake Crabtree, where multiple surface water samples were collected. Therefore, no PCBs were detected in surface water within the OU1 areas.

6.4 Sediment and Stream Banks

The following subsections describe the various sediment sampling activities that were conducted as part of the investigation.

6.4.1 Sampling

In May 2003, a sediment investigation was conducted to assess the extent of site-related contamination in the unnamed tributary to Little Brier Creek. Sediment samples were collected across the stream width, from midstream and bank side locations, along the unnamed tributary to Little Brier Creek between the Ward Transformer facility's stormwater lagoon outfall and the confluence of Little Brier Creek proper (Reaches A, B, and C). The midstream samples were collected from underwater, but the bank samples were collected from the sediments just above the surface water level in the sides of the stream banks. Samples were attempted at depth intervals of 0 to 6 inches and 6 to 12 inches, where possible. However sediment samples from depths of 6 to 12 inches were not obtained at all sample locations due to refusal.

In November 2003, based on the analytical results of the sediment sampling activities described above identifying PCBs in the sediment, additional sediment samples were collected from Little Brier Creek proper at the culvert crossing beneath Northern Wake Expressway/I-540 downstream to Lake Crabtree. The additional sediment investigation was conducted to estimate the extent of site-related contamination in the following surface water bodies: Little Brier Creek, Brier Creek Reservoir, Brier Creek, and Lake Crabtree. In addition to the new sampling locations described above, specific May 2003 sediment sample locations were sampled to deeper depths in November 2003 because many of the sediment samples collected from Reaches A, B, and C of the unnamed tributary to Little Brier Creek in May 2003 contained PCB contamination in the deepest sample collected. This additional sampling was conducted to determine the vertical extent of PCB contamination in order to evaluate potential remedial approaches and costs. The additional samples were collected beneath the locations of the midstream and bank samples that were collected across the stream width during the May 2003 sampling that contained the highest PCB concentrations.

Following the completion of the September 2004 RI and Baseline Human Health Risk Assessment (BHHRA) Reports, it was determined that additional environmental investigation activities were warranted in the vicinity of the Ward Transformer Site. As a result, in October 2004, sediment samples were collected from tributary streams to Lake Crabtree in order to assess background conditions and to identify other potential contaminant sources. One sediment sample was collected from one location on each of the following Lake Crabtree tributary streams: Stirrup Iron Creek, Crabtree Creek, upstream of Lake Crabtree, Black Creek, and Haley's Branch. In addition, in order to further assess the extent of sediment contamination downstream from the Ward Transformer facility, sediment samples were collected from Crabtree Creek between Lake Crabtree and the eastern edge of Umstead Park.

In November 2004, because fish samples collected from Lake Crabtree (discussed below) contained concentrations of PCBs that prompted fish consumption advisories by the State of North Carolina, additional sediment samples were collected from Lake Crabtree in order to further refine the estimated extent and magnitude of site-related contaminants.

In December 2005, based on input from the local community/stakeholders, additional sediment sampling was performed in the unnamed tributary to Little Brier Creek between the Ward Transformer facility's stormwater lagoon outfall and the culvert beneath the Northern Wake Expressway/I-540 crossing (Reach A) in order to further characterize potential human health and ecological risk associated with site-related contaminants.

In February and March 2006, in response to concerns expressed by the local community/stakeholders, additional sediment samples were collected at previously sampled locations downstream from the Ward Transformer facility, as well as from new locations further downstream. The locations include Reach D; the vicinity of the relic Little Brier Creek and Brier Creek stream channel/floodplain now submerged in Brier Creek Reservoir; Brier Creek, upstream of its confluence with Lake Crabtree; the vicinity of the relic Brier Creek and Crabtree Creek stream channel/floodplain now submerged in Lake Crabtree; the vicinity of the Lake Crabtree shoreline; Crabtree Creek, upstream and downstream of Lake Crabtree; two tributary streams to Crabtree Creek, Richland Creek, and Mine Creek; the Neuse River, upstream and downstream of its confluence with Crabtree Creek. Sediment samples were collected at the above locations from multiple depth intervals, with a maximum sample depth of 3.5 ft. Some of the targeted depth intervals were not achievable due to refusal.

6.4.2 Sediment and Stream Banks – Results Summary

Sediment sampling results are shown in Figures 5 through 10. A summary of the maximum PCB concentration detected in the OU1 study areas is summarized in Table 3.

Table 3 - Sediment, Maximum Concentrations

LOCATION	AROCLOR MAXIMUM CONCENTRATION (mg/kg)
Reach A	380
Reach B	3.0
Reach C	2.6
Reach D	4.2
Brier Creek Reservoir	0.31
Brier Creek	0.28
Lake Crabtree Sector A	0.48
Lake Crabtree Sector B	0.18
Lake Crabtree Sector C	0.041
Crabtree Creek	Not detected
Neuse River	Not detected
Stirrup Iron Creek	Not detected
Upper Crabtree Creek	Not detected
Black Creek	Not detected
Haleys Branch	Not detected
Richland Creek	Not detected
Mine Creek	Not detected
Upper Neuse River	Not detected

6.5 Floodplain Soil

The following subsections describe floodplain soil sampling conducted as part of the investigation of the OU1 areas. Most of the floodplain soil data was collected from Reach A which is the study area closest to the source. Reach A is being addressed as part of the removal action, and is not part of OU1. As part of the removal action, floodplain soil from Reach A is being removed to levels below 1 mg/kg.

6.5.1 Sampling

In February and March 2006, soil samples were collected from the floodplain of surface water bodies downstream of the Ward Transformer facility. The soil samples were collected to determine if floodplain soils have been impacted by site-related contaminants and if they contained PCB concentrations that may pose an unacceptable risk to human health and/or ecological receptors. Sample locations targeted relatively high-use recreational areas (e.g., fishing, hiking, biking, athletic fields, etc.) of the Brier Creek Reservoir and Lake Crabtree floodplain, focusing on potential depositional areas where contaminants would tend to accumulate.

Soil samples were collected from the floodplain area at Lake Crabtree County Park, including the following:

- Open Play area, located adjacent to the Water Wise Garden, volleyball courts, and parking area.
- Vicinity of the boat-rental/beach area.
- Public boat ramp area.
- Car-top boat launching area.
- Areas used for biking, recreational shoreline fishing, and walking/hiking. Specifically, in the vicinity of Lake Crabtree County Park's Lake Trail, the Lake Crabtree Dam's spillway, and the Black Creek Greenway.
- Lake Crabtree floodplain along its southern shoreline.
- Upstream of Lake Crabtree, at an athletic field at the Cedar Fork District Park.

6.5.2 Floodplain Soil - Results Summary

Floodplain soil sampling results are shown in Figures 5 to 9.

Table 4 summarizes the floodplain soil results for PCB Aroclor 1260 analyses.

Table 4 – Floodplain Soil Maximum Aroclor Concentrations

LOCATION	CONCENTRATION (mg/kg)
Reach A (outside floodplain soils)	380
Reach A	1.1
Reach B	Not sampled
Reach C	Not sampled
Reach D	0.048
Brier Creek Reservoir	0.048
Brier Creek	Not sampled
Lake Crabtree	Not detected
Upper Crabtree Creek	Not detected
Crabtree Creek	Not detected

6.6 Crayfish and Fish Tissue

In order to characterize potential human health and ecological risk associated with uptake of PCBs by aquatic biota, fish samples were collected from surface water bodies located downstream from the Ward Transformer facility. Prior to sampling, a Scientific Collection Permit (SCP) was obtained from the North Carolina Wildlife Resources Commission (NCWRC). Collection activities were performed in accordance with the requirements of the SCP. Contaminant concentration data from whole body composite samples were collected for assessing risk to potential ecological receptors, such as piscivorous mammals or birds. Contaminant concentration data from fish filet composite samples were collected for assessing risk to potential human receptors.

6.6.1 Sampling

May 2003 Sampling – Reach B and Brier Creek Reservoir

In May 2003, aquatic biota sampling was performed in Reach B of the unnamed tributary to Little Brier Creek. The sampling area in Reach B was located approximately 0.5 miles downstream of the Ward Transformer facility's stormwater lagoon outfall, and included Reach B's initial 0.15-mile length downstream of the Northern Wake Expressway/I-540. Target fish species established for the creek sampling included cyprinid minnows or small centrarchids (sunfish). However, cyprinid minnows were not dominant components of the biota in the creek. Because crayfish were abundant in the creek and are a preferred prey for raccoons and piscivorous birds, crayfish were sampled in lieu of cyprinids. In addition, pumpkinseed sunfish and yellow bullhead were collected. Whole body composite samples were prepared from crayfish, pumpkinseed sunfish, and yellow bullhead. All aquatic biota were collected in Reach B using a backpack-mounted electrofisher.

Also in May 2003, fish samples were collected from Brier Creek Reservoir. In order to determine whether spatial differences in fish tissue concentrations were present, three areas were operationally defined based on reservoir morphology. The upper portion of Brier Creek

Reservoir was considered to extend from the last free-flowing location in Little Brier Creek approximately 0.2 mile downstream to the twin culverts beneath the Globe Road crossing (i.e., 0.2-mile downstream section of Reach D). The middle (downgradient) portion of Brier Creek Reservoir was considered to extend from the culverts beneath the Globe Road crossing approximately 0.45 mile downstream to the culverts beneath the Nelson Road crossing. The lower portion of Brier Creek Reservoir was considered to extend from the Nelson Road crossing, downstream to the Aviation Parkway crossing, and then downstream to the breast of the dam that forms Brier Creek Reservoir, a total length of approximately 1.2 miles.

Fish samples were collected from Brier Creek Reservoir using two different gear types. A boat-mounted Coffelt electrofisher was used to collect largemouth bass (*Micropterus salmoides*) and bluegill sunfish (*Lepomis macrochirus*) specimens. Brown bullheads (*Ameiurus nebulosus*) were collected by trotlining. A total of three discrete locations were selected for individual trotline sets and captured target fish specimens were segregated by location. Trotline No. 1 was located in the upper portion of the Brier Creek Reservoir sampling reach, and Trotlines No. 2 and No. 3 were located in the middle portion of the Brier Creek Reservoir sampling reach. Largemouth bass and bluegill sunfish specimens retained for tissue analyses were also segregated by capture locations defined as the upper Brier Creek Reservoir and middle Brier Creek Reservoir. Three whole body composite samples were prepared from bluegill sunfish collected from Brier Creek Reservoir. Three filet tissue composite samples each were prepared from bluegill sunfish, largemouth bass, and brown bullheads from Brier Creek Reservoir.

November 2003 Sampling – Brier Creek Reservoir, Brier Creek, and Lake Crabtree

In November 2003, additional fish tissue samples were collected in the lower portion of Brier Creek Reservoir (downstream of Nelson Road), Brier Creek (between Brier Creek Reservoir and Lake Crabtree) and Lake Crabtree (from three areas) to determine the downstream extent of fish contamination.

In the lower portion of Brier Creek Reservoir (downstream of Nelson Road), composite whole body samples of bluegill sunfish and green sunfish were collected for assessing risk to potential ecological receptors such as piscivorous mammals or birds. In addition, four composite samples consisting of three to five fish each were collected for assessing potential human health risk to recreational fisherman. These included filet tissue samples obtained from brown bullhead, yellow bullhead, bluegill sunfish, and largemouth bass. Scaled, skin-on filet tissue samples were prepared from the individual fish. One composite sample was prepared from each of these groups.

Three composite samples were collected in Brier Creek, between Brier Creek Reservoir and Lake Crabtree, for assessing risk to potential ecological receptors such as piscivorous mammals or birds. Whole body tissue samples were prepared from crayfish, yellow bullhead, and bluegill sunfish.

Three composite samples of whole body bluegill sunfish were collected from Lake Crabtree for assessing risk to potential ecological receptors such as piscivorous mammals or birds. Composite samples were collected to represent the northern (Sector A), western (Sector B), and eastern (Sector C) portions of Lake Crabtree. In addition, ten composite samples consisting of three to five fish each were collected from Lake Crabtree for assessing potential human health risk to recreational fishermen. In addition to the target species of largemouth bass and bluegill sunfish from the May 2003 sampling event, carp were also targeted as requested by NC DENR. Carp species are popular among local fishermen in the area for both sport and as table fare. Because Lake Crabtree has been actively managed by the state as a large catfish fishery, channel catfish (*Ictalurus nebulosus*) were sampled in lieu of brown bullhead. Scaled, skin-on filet tissue samples (skin-off for catfish species) were prepared from the individual fish. Fish collection techniques in Brier Creek Reservoir and Lake Crabtree consisted of boat-mounted electrofishing gear and trotlining. Fish collection techniques in Brier Creek consisted of backpack-mounted electrofishing.

November 2004 Sampling – Lake Crabtree and Crabtree Creek

In November 2004, additional fish sampling was performed in Lake Crabtree and Crabtree Creek (downstream of Lake Crabtree) because fish from the most distant downstream locations sampled (in Lake Crabtree) contained concentrations of PCBs that prompted fish consumption advisories by the State of North Carolina.

Additional whole body samples were collected from Lake Crabtree for assessing risk to potential ecological receptors such as piscivorous mammals or birds. In order to determine whether spatial differences in fish tissue concentrations were present, sample collection was performed in Sectors B and C of Lake Crabtree. Two whole body samples were prepared from Sector B; one sample was comprised of one largemouth bass (*Micropterus salmoides*) and the other sample was comprised of one channel catfish (*Ictalurus punctatus*). Two whole body samples were prepared from Sector C; one sample was comprised of one largemouth bass and the other sample was comprised of one channel catfish. Sampling was performed using two different gear types. A boat-mounted Coffelt electrofisher was used to collect largemouth bass specimens and channel catfish were collected by trotlining. Largemouth bass and channel catfish specimens retained for tissue analyses were segregated by capture locations within Sectors B and C of Lake Crabtree.

Three approximately 1,000-ft long reaches within an approximately 5-mile long span of Crabtree Creek were targeted for fish sampling. Targeted fish for the Crabtree Creek sampling were to be comparable to the targeted fish from previous sampling efforts at locations in Brier Creek Reservoir and the portion of the unnamed tributary to Little Brier Creek closer to the Ward Transformer facility (i.e., Reach B). However, because the dominant members of Crabtree Creek's fish community varied between the three sampling reaches, alternative species from the same trophic levels were substituted. Species collected by electrofishing in Crabtree Creek between Lake Crabtree and I-40 included pumpkinseed sunfish, bluegill sunfish, and channel catfish. The sampling reaches in Crabtree Creek located at Umstead State Park, downstream of the Company Mill Crossing trail and upstream of Ebenezer Church Road, yielded redbreast

sunfish (*Lepomis auritus*), bluegill sunfish, and yellow bullhead. Whole body composite samples were prepared from pumpkinseed sunfish, bluegill sunfish, channel catfish, redbreast sunfish, and yellow bullhead. Filet tissue composite samples were prepared from pumpkinseed sunfish, bluegill sunfish, channel catfish, and redbreast sunfish. Composite filet tissue samples of the sunfish species were each comprised of scaled, skin-on filets. Channel catfish composite samples were skinned filets. Sampling in Crabtree Creek was performed using a backpack-mounted electrofisher.

August 2005 Sampling – Crabtree Creek

In August 2005, the NC DENR's Division of Water Quality (NCDWQ) collected eight composite fish samples from Crabtree Creek, downstream of Lake Crabtree, for assessing potential human health risk to recreational fishermen. Four discrete sample locations along Crabtree Creek were targeted and included the creek's crossing at the following: Company Mill trail, located within William B. Umstead State Park; Duraleigh Road Bridge; Crabtree Valley Mall near the Homewood Banks Drive Bridge; and Wake Forest Road Bridge.

The samples consisted of four to seven fish each and included filet tissue samples obtained from largemouth bass, channel catfish, and flathead catfish. Scaled, skin-on filet tissue samples (skin-off for catfish species) were prepared from the individual fish. Sampling in Crabtree Creek was performed using a backpack-mounted electrofisher.

February and March 2006 Sampling – Brier Creek Reservoir

Whole body fish sampling from middle and lower Brier Creek Reservoir was performed in February and March 2006 in order to reduce uncertainties in the ecological risk assessment for the Ward Transformer Superfund Site. The subsequent data were primarily used to better evaluate the risks to bald eagles and other carnivorous raptors that use Brier Creek Reservoir for foraging. One whole body composite sample consisting of five fish was collected from yellow bullhead (*Ameiurus natalis*). In addition, due to sufficient body mass, three whole body grab samples were collected from largemouth bass (*Micropterus salmoides*). Sampling in Brier Creek Reservoir in February and March 2006 was performed using two different gear types. A boat-mounted Coffelt electrofisher was used to collect largemouth bass specimens, and yellow bullhead specimens were collected by trotlining.

6.6.2 Crayfish and Fish Tissue – Results Summary

Aquatic biota (fish and crayfish) were collected downstream of the Ward Transformer facility. Whole body samples were collected in Reach B, Brier Creek Reservoir, Brier Creek, Lake Crabtree, and Crabtree Creek for evaluating potential risk to ecological receptors. Fish filet tissue samples were collected from Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek to assess potential impacts to humans from fish consumption.

Samples of aquatic biota collected from downstream water bodies showed the presence of site contaminants. Crayfish and whole body fish samples (pumpkinseed sunfish and yellow bullhead) collected from Reach B contained significant concentrations of Aroclor 1260 and various PCB congeners and dioxins/furans. Sampling results are presented in Figures 11 and 12.

The highest concentrations were found in a whole body pumpkinseed sunfish sample from Reach B, with an Aroclor 1260 concentration of 75 mg/kg and a combined PCB and dioxin/furan TEQ concentration of 598 ng/kg. Table 5 summarizes the PCB Aroclor 1260 data by reach and fish species.

Table 5 –Fish, Maximum PCB Concentrations (mg/kg)

DOWNSTREAM REACH	CRAYFISH (WHOLE BODY)	YELLOW BULLHEAD (WHOLE BODY)	BLUEGILL SUNFISH (WHOLE BODY)	LARGEMOUTH BASS (FILET)	CHANNEL CATFISH (FILET)
Reach B	11	22	---	---	---
Upper Brier Creek Reservoir	---	---	2.5	1.8	---
Middle Brier Creek Reservoir	---	---	2.5	2.6	---
Lower Brier Creek Reservoir	---	---	0.38	0.65	---
Brier Creek	0.074	0.5	0.49	---	---
Lake Crabtree Sector A	---	---	0.9	0.3	0.67
Lake Crabtree Sector B	---	---	0.17	0.12	1.3
Lake Crabtree Sector C	---	---	0.15	0.19	1.7
Crabtree Creek	---	0.074	0.59	0.18	0.34

Legend: --- Not sampled

As indicated in the table above, PCB Aroclor 1260 results generally show a declining trend in both whole body and filet concentrations in the samples farther downstream from the Ward Transformer facility. Fish tissue data from Crabtree Creek indicate continued downstream transport of PCBs below Lake Crabtree. Although the sediment samples from Crabtree Creek did not contain detectable concentrations of PCBs, their presence in fish samples indicates uptake and bioaccumulation of PCBs via the food chain.

Based on the analytical results of the fish tissue samples, the North Carolina Division of Public Health issued fish consumption advisories for the protection of humans consuming fish potentially contaminated with PCBs. The fish consumption advisories action levels for PCB are described in Tables 6.

Table 6 – Fish Consumption Recommended Limits

TOTAL PCB LEVELS IN FISH (mg/kg)	RECOMMENDED MEAL LIMITS
<0.05	Unlimited consumption.
0.05 to 0.10	One meal per week.
0.10 to 0.50	One meal per month
>0.5	Do not eat

The fish consumption advisories that are currently in effect for the water bodies within OU1 are summarized in Table 7.

Table 7 – Current Fish Consumption Advisories for OU1 areas

AREA	NORTH CAROLINA FISH CONSUMPTION ADVISORY
Brier Creek Reservoir Little Brier Creek (downstream of Brier Creek Parkway) Tributaries to Little Brier Creek	Do not eat fish.
Brier Creek	Do not eat any fish.
Lake Crabtree	Do not eat carp or catfish. Limit consumption of all other fish to no more than one meal per month.
Crabtree Creek (above Lake Crabtree and below Lake Crabtree to where it enters the Neuse River)	Limit consumption of carp, catfish, and largemouth bass to no more than one meal per month.

7.0 CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES

Land use in the vicinity of the Ward Transformer facility is primarily industrial and commercial, with major highways located north (US highway 70) and west (I-540). Two properties located east of the site, across Mount Herman Road, were formerly used as residences. These properties are currently vacant or now used for commercial purposes. Much of the land located south-southwest of the property is owned by the RDU Airport Authority. The airport land, and the facility and surrounding industrial/commercial properties are generally access restricted (fenced). The properties located to the rear (northwest, west, and southwest) of the Ward Transformer facility consist of vacant undeveloped woodland.

Land use along the Reach A through D portions of the downstream study area, includes undeveloped woodland primarily owned by the RDU Airport Authority or Ward Ventures LLC. Along Reaches B and C, the nearest developed properties consist of commercial retail businesses. Along the western portion of Reach D, land is used for commercial purposes and

mainly consists of warehouse distribution buildings. The eastern portion of Reach D is owned by the RDU Airport Authority and is access restricted.

The nearest active residence downstream of the site is located approximately 1.7 miles downstream, at 10305 Globe Road, in the vicinity of Little Brier Creek's mouth at Brier Creek Reservoir. Two properties located on the north bank of Brier Creek Reservoir, between Globe Road and Nelson Road, were formerly used for residential purposes. These residences are vacant, however, and future land use of the properties will be for non-residential purposes. The remainder of land around Brier Creek Reservoir is primarily owned by the RDU Airport Authority and is access restricted. Brier Creek Reservoir is posted by Wake County to restrict trespassers.

Land use in the vicinity of Brier Creek between Brier Creek Reservoir and Lake Crabtree consists of commercial office space and undeveloped land under RDU Airport Authority control. The portion of Lake Crabtree northwest of Aviation Parkway, in the vicinity of Brier Creek's mouth, is undeveloped dense forest and wetland and is generally inaccessible. To the southeast of Aviation Parkway, Wake County owns a park that surrounds most of Lake Crabtree (Lake Crabtree County Park) and is used extensively for recreation. The park is located along the lake's north shore, while a walking/hiking trail (Lake Trail) generally follows the entire lake's shoreline and connects with adjacent community greenways. Lake Trail and the greenways are heavily used by joggers, walkers, and bikers. Lake Crabtree is a recreational fishery, but the park has posted fishing advisories and "catch and release" rules to protect fishermen from eating contaminated fish. Beyond the Lake Trail, the land is primarily used for commercial office space, although a property located along the southeastern portion of the lake is currently being developed for mixed residential and non-residential uses.

From Lake Crabtree, land use features along Crabtree Creek include the North Cary Wastewater Treatment Plant (WWTP), I-40, and William B. Umstead State Park (Umstead Park), a relatively undisturbed forested area. The state park protects nearly 5,400 acres of forestland, through which Crabtree Creek flows for several miles. Upon exiting Umstead Park, land use along Crabtree Creek is primarily suburban residential, until the creek approaches US Highway 70/Glenwood Avenue, after which land use becomes more urbanized. Land use along Crabtree Creek for the remainder of the downstream study area is primarily heavily urbanized, including dense residential and commercial/industrial/institutional use within the City of Raleigh.

8.0 SUMMARY OF SITE RISKS

The Baseline Human Health Risk Assessment (BHHRA) and the Baseline Ecological Risk Assessment (BERA) present the summary of the results of the comprehensive deterministic risk assessments of the potential threats to public health and the environment posed by the OUI areas under current and future conditions assuming that no remedial actions take place. The assessments provide the basis for taking action and identify the site related contaminants and

exposure pathways that need to be addressed by the remedial action. The BHHRA and BERA are part of the RI report. The RI report presents more details and is part of the administrative record for the Site. This section presents a summary of the BHHRA and BERA.

PCBs have been detected in soil, sediment, and fish at various locations downstream from the Ward Transformer facility. The areas addressed under OU1 extend from Reach B (0.4 miles downgradient of the Ward Transformer facility) to the end of Crabtree Creek at the Neuse River. (Figure 1)

Note that Reach A is included in the risk discussion, because Reach A was grouped with all the other downgradient areas during the planning stages of the risk assessment process. However, as previously noted, sediment and flood plain soil from Reach A are being addressed under the ongoing time critical removal action.

8.1 Baseline Human Health Risk Assessment (BHHRA)

The BHHRA estimates the risks the Site poses to humans if no action were taken. It provides the basis for taking action and identifies the contaminants and exposure pathways that need to be addressed by the remedial action. The sections below summarize the results of the BHHRA for OU1.

8.1.1 Identification of Chemical of Concern (COC)

Chemicals of concern (COCs) are a subset of the site-related chemicals that were carried through the risk assessment (Chemicals of Potential Concern (COPCs)) that significantly contribute to the cumulative site risk.

The carcinogen trigger represents the summed risks to a receptor considering all pathways, media, and routes per land use scenario. The Hazard Index (HI) represents the total of the Hazard Quotients (HQs) of all COPCs in all pathways, media, and routes to which the receptor is exposed. Chemicals are not considered as significant contributors to risk if their individual carcinogenic risk contribution is less than 1×10^{-6} and their noncarcinogenic HQ is less than 0.1; therefore, these chemicals are not included as COCs. In addition, because 2,3,7,8 TCDD TEQ did not exceed the 1×10^{-4} cumulative site risk level or the site HI of 1 used as the remediation triggers, it is not included in the list of COCs.

Based on the BHHRA the COCs for OU1 are PCBs and PCB congeners. Although some of the calculated human health risks are associated with exposure to dioxins and furans (2,3,7,8 TCDD TEQ), over 90% of the risks are associated with PCBs (Aroclor 1260 or PCB congeners). As such PCBs and PCB congeners are the site-related chemicals driving the need for a remedial action at OU1.

The tables below present the COCs and their exposure point concentrations (EPCs) for each media and study area with significant routes of exposure. The tables also include the range of

concentrations, as well as the frequency of detections (i.e., the number of times the chemical was detected in the samples collected), the EPC (i.e., the concentration that was used to estimate exposure and risk for each COC in the specific media and area), and how the EPC was derived. Aroclor 1260 was the most frequently detected COC in all media and all areas. In most cases, the 95% UCL on the arithmetic mean was used as the EPC. However, for PCB congeners in some media where there were limited amount of sample data available, the maximum concentration was used as the default exposure point concentration. The COCs for the OUI ROD are presented in Tables 8 to 13.

Table 8 – Reach A - Chemicals of Concern (Floodplain Soil)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: SOIL								
Exposure Medium: FLOODPLAIN SOIL								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Floodplain Soil	Aroclor 1260	0.21	380	mg/kg	11/14	148	mg/kg	95% UCL
	PCB Congener TEQ	0.000288	0.00363	mg/kg	2/2	0.00363	mg/kg	MAXIMUM
Key: mg/kg: Milligrams per kilogram 95 % UCL- 95 percent Upper Confidence Limit								

Table 9 – Reach A - Chemicals of Concern (Sediment)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: SEDIMENT								
Exposure Medium: SEDIMENT								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration (EPC)	EPC Units	Statistical Measure
		Min	Max					
Sediment	Aroclor 1260	0.014	62.0	mg/kg	33/33	19.8	mg/kg	95% UCL
	PCB Congener TEQ	0.000209	0.105	mg/kg	11/11	0.071	mg/kg	95% UCL
Key: mg/kg: Milligrams per kilogram 95 % UCL- 95 percent Upper Confidence Limit								

**Table 10 - Reaches B-C-D, Brier Creek Reservoir and Brier Creek
Chemicals of Concern (Sediment)**

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: SEDIMENT								
Exposure Medium: SEDIMENT								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration (EPC)	EPC Units	Statistical Measure
		Min	Max					
Sediment	Aroclor 1260	0.0195	4.2	mg/kg	53/67	1.2	mg/kg	+95% UCL
	PCB Congener TEQ	0.000000589	0.005	mg/kg	25/25	0.0014	mg/kg	95% UCL
Key: mg/kg: Milligrams per kilogram UCL: Upper Confidence Limit								

Table 11 - Brier Creek Reservoir Chemicals of Concern (Fish)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: FISH								
Exposure Medium: FISH FILLET								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Fish	Aroclor 1260	0.22	2.60	mg/kg	12/12	1.64	mg/kg	95% UCL
	PCB Congener TEQ	0.000000452	0.0000311	mg/kg	12/12	0.000024	mg/kg	95% UCL
Key: mg/kg: milligrams per kilogram UCL: Upper Confidence Limit								

Table 12 – Lake Crabtree Chemicals of Concern (Fish)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: FISH								
Exposure Medium: FISH FILLET								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Fish	Aroclor 1260	0.100	1.70	mg/kg	10/10	0.99	mg/kg	95% UCL
	PCB Congener TEQ	0.0000259	0.0000311	mg/kg	10/10	0.000030	mg/kg	95% UCL
Key: mg/kg: milligrams per kilogram UCL: Upper Confidence Limit								

Table 13 – Crabtree Creek Chemicals of Concern (Fish)

SUMMARY OF CHEMICALS OF CONCERN AND MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATIONS								
Scenario Timeframe: CURRENT AND FUTURE								
Medium: FISH								
Exposure Medium: FISH FILLET								
Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Fish	Aroclor 1260	0.033	0.34	mg/kg	9/12	0.18	mg/kg	95% UCL
	PCB Congener TEQ	0.00000103	0.00000683	mg/kg	11/11	0.0000068	mg/kg	MAXIMUM
Key: mg/kg: milligrams per kilogram UCL: Upper Confidence Limit								

8.1.2 Exposure Assessment

The goal of the exposure assessment is to determine the extent of potential exposure of susceptible populations. PCB contamination as a result of past operational practices at the Ward Transformer facility is the primary source of concern at the study areas. A summary of the exposure assessment results is presented below. Section 5.3 of the RI report presents the complete exposure assessment conducted as part of the risk assessment process.

8.1.2.1 Characterization of current and future land and water uses of the study areas

PCBs migrating from the Ward Transformer facility have been detected in soil, sediment, surface water, and fish in various segments of the study area. Land and surface water extending from the Ward Transformer facility to the Neuse River have a number of current and potential future uses. Figure 1-5 illustrates the locations of the areas described below.

- **Reach A** – Reach A does not support recreational fishing or swimming due to its small size and intermittent flow, and most likely, will not be developed in the future for residential use. However, the area along the unnamed tributary to Little Brier Creek can be accessed by current or future trespassers and contact with surface water and sediment could occur during wading or other similar activities.
- **Reaches B, C, and D** – Reaches B and C are part of the unnamed tributary. Reach D is the Little Brier Creek, prior to its entrance into Brier Creek Reservoir. These reaches are not zoned for residential development. These areas do not support recreational fishing or swimming due to the small size of the stream therefore, fish file data was not collected here. It was assumed that resident children may wade in these areas.
- **Brier Creek Reservoir and Lake Crabtree** – Brier Creek Reservoir and Lake Crabtree contain significant numbers of sport fish including catfish species, largemouth bass, and bluegill sunfishes. Recreational fishing occurs currently and will likely continue to occur in the future. Fish samples collected during the RI contain PCBs. Fish advisory signs are in place in the Brier Creek Reservoir area and Lake Crabtree warning fishermen of the detection of dangerous levels of PCBs in recreationally caught fish. In addition to fishing activities, publicly accessible swimming areas at Lake Crabtree may expose families to contaminants in surface water and sediment while swimming. Residential development is possible near Brier Creek Reservoir; thus, a future resident wader scenario was considered for this area. Bicycle paths and ball fields are present at Lake Crabtree therefore, bikers/joggers and ball players could potentially be exposed to contaminated soil. Children in areas adjacent to Reaches B, C, and D could potentially wade in sediment and surface water of Brier Creek Reservoir. Because the swimming exposure pathway was evaluated at Lake Crabtree, a wader scenario was not considered in Lake Crabtree.
- **Lower Brier Creek** – This area is between Brier Creek Reservoir and Lake Crabtree. This portion of the creek does not support recreational fishing or swimming, and no fish file

tissue data are available for evaluation. A child resident could wade in sediment and surface water.

- **Crabtree Creek** – This area is between Lake Crabtree and the Neuse River. This area supports recreational fishing.

8.1.2.2 Exposure Pathway Analysis

An exposure pathways analysis depicts the contaminated media, potential exposure routes and pathways, and potentially susceptible known or potential human populations. A key function of the analysis is to identify complete exposure pathways and to assist in the development of exposure scenarios and dose estimation models.

Exposure Scenarios

There are several susceptible populations in the study areas. The following exposure scenarios were considered in the risk assessment:

- Current/Future Trespasser in Reach A – Evaluated.
- Future Resident in Reaches B, C, and D – Based on zoning restrictions and the improbability of development in these areas, residential risks were not quantitatively evaluated.
- Future Resident Wader in Reaches B, C, and D, Brier Creek Reservoir, and Brier Creek – Evaluated.
- Current/Future Recreational Fisher in Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek – Evaluated.
- Current/Future Swimmer in Lake Crabtree – Evaluated.
- Current/Future Biker/Jogger at Lake Crabtree Park – PCB Aroclors were not detected in any of the soil samples and the TEQ for the detected PCB congeners was less than EPA screening value.
- Current/Future Ball Player at Lake Crabtree Park – PCB Aroclors were not detected in any of the soil samples and the TEQ for the detected PCB congeners was less than the EPA screening value.

Exposure Pathways

Exposure pathways evaluated for each scenario are presented in Table 8-1 (Appendix B). A simplified chart summarizing these exposures is presented in Table 14 below.

Table 14 - Summary of Complete Exposure Pathways Evaluated

EXPOSURE PATHWAY	DESCRIPTION	REACH A	REACHES B, C, AND D	BRIER CREEK RESERVOIR	BRIER CREEK	LAKE CRABTREE	CRABTREE CREEK
Soil Contact	Incidental ingestion, dermal contact, dust inhalation	Adolescent trespasser	Child and adult resident waders	Child and adult resident waders	Child and adult resident waders		
Sediment Contact	Incidental ingestion, dermal contact	Adolescent trespasser	Child and adult resident waders	Child and adult resident waders	Child and adult resident waders		
Surface Water Contact	Incidental ingestion, dermal contact					Child and adult swimmers	
Fish Ingestion	Consumption of recreationally caught fish			Child and adult recreational fishermen		Child and adult recreational fishermen	Child and adult recreational fishermen

8.1.3 Toxicity Assessment

The toxicity assessment will identify and define the toxicity values for the evaluation of COPCs at the Ward Transformer Superfund Site. These toxicity values are applied to the estimated exposure doses in order to calculate potential cancer risks and noncancer health effects.

Chemicals that have evidence of carcinogenicity are referred to as carcinogens. Excessive exposure to all chemicals potentially can produce adverse noncancer health effects, while the potential for causing cancer is limited to carcinogens. Therefore, noncancer toxicity values can be developed for all chemicals, while cancer toxicity values can be developed only for carcinogens. The noncancer toxicity values used in this risk assessment are termed reference doses (RfDs), and the cancer toxicity values are termed cancer slope factors (CSFs).

RfDs and CSFs are expressed in units of milligrams of chemical per kilogram of body weight per day (mg/kg-day), or cancer risk per mg/kg-day, respectively. Inhalation reference concentrations (RfCs) and unit risk factors (URFs) are converted to RfDs and CSFs, respectively, according to EPA guidance.

See Tables 8-2 through 8-5 (Appendix B) for cancer slope factors and RfDs used in the BHHRA.

Carcinogenic Effects

Weight-of-Evidence Categorization

EPA has assigned each chemical a weight-of-evidence, which represents the likelihood of it being a human carcinogen. Six weight-of-evidence categories exist:

- **A** Human carcinogen, based on sufficient evidence from human data.
- **B1** Probable human carcinogen, limited human data are available.
- **B2** Probable human carcinogen, sufficient evidence in animals and inadequate or no evidence in humans.
- **C** Possible human carcinogen, limited evidence of carcinogenicity in animals and evidence in humans is inadequate.
- **D** Not classifiable as to human carcinogenicity, based on inadequate data in humans and animals.
- **E** No evidence of carcinogenicity in humans in at least two adequate animal tests in different species or in both adequate epidemiological and animal studies.

The Guidelines for Carcinogen Risk Assessment recommends a different scheme for weighting evidence of carcinogenicity than has been traditionally used in risk assessments. The new guidelines recommend replacing these classifications with descriptions of known likely, cannot be determined, or not likely. However, the COPCs in this BHHRA are still classified by the old system in the IRIS database.

The oral, inhalation, and dermal CSFs used in this risk assessment are expressed as an inverse dose, in units of mg/kg-day^{-1} . When EPA develops inhalation toxicity values to express carcinogenic potency through the inhalation exposure route, the values are usually developed as an inhalation URF. The URF is expressed as an inverse concentration in air in units of micrograms of chemical per cubic meter of air $(\mu\text{g/m}^3)^{-1}$. The inhalation unit risks are converted to slope factors in accordance with EPA guidance.

Dermal Slope Factors

Although EPA has developed oral and/or inhalation slope factors for a number of carcinogens, dermal slope factors have not been derived for any chemicals. EPA has published guidance, however, for calculating dermal slope factors for chemicals for which an oral slope factor is available. In accordance with EPA guidance, a dermal slope factor is derived for PCBs by dividing its oral slope factor by an appropriate absorption factor. This results in the conversion of the oral slope factor, which represents the carcinogenic potency of the administered dose, to a dermal slope factor, which represents the carcinogenic potency of the absorbed dose. The conversion is necessary to be able to calculate risk through the dermal pathway. The dermal slope factors must be consistent with the dermal doses, which are calculated in the exposure assessment as absorbed doses. The oral and inhalation doses, by contrast, are calculated as

administered doses and are evaluated using CSFs based on the administered dose. EPA has recommended a PCB gastrointestinal (GI) tract absorption factor of 100%.

Polychlorinated Biphenyls (PCBs)

PCBs are sometimes referred to by their commercial name, Aroclors. Aroclors are complex mixtures of varying amounts of PCB congeners. There are 209 known PCB congeners consisting of varying numbers of chlorine atoms. Each specific Aroclor mixture has a unique congener profile. Congeners are classified according to 10 homologue groups, depending on the number of chlorines (i.e., monochlorinated to decachlorinated homologues) attached to the biphenyl molecule. The congener content of each homologue group is dependent on the manufacturing method used to prepare the mixture. Lower numbered Aroclors (e.g., Aroclor 1016, Aroclor 1221) tend to be mixtures of congeners with lower chlorine content than the higher numbered Aroclors (e.g., Aroclor 1254, Aroclor 1260).

Non-cancer Health Effects

Derivation of Reference Doses (RfDs)

The toxicity values that are used in this risk assessment to estimate the potential for adverse noncancer health effects are termed RfDs. The term RfD refers to the daily intake of a chemical to which an individual can be exposed without any expectation of noncancer health effects (e.g., organ damage, biochemical alterations) occurring during a given exposure duration. As the RfD decreases in value, the chemical is more toxic in producing noncancer health effects.

EPA has derived RfDs for two different exposure periods. Chronic RfDs have been developed to evaluate human exposures of greater than 7 years. Subchronic RfDs have been provisionally developed to evaluate exposure periods in humans of 2 weeks to 7 years. Unlike the approach used in deriving CSFs, it is assumed when deriving RfDs that a threshold dose exists below which there is no potential for systemic toxicity.

RfDs are expressed as a dose in units of mg/kg-day. When deriving noncancer toxicity values for the inhalation exposure route, EPA expresses the value as a reference concentration (RfC) in units of milligrams of chemical per cubic meter of air (mg/m³). Because exposure doses for all pathways, including the inhalation pathway, are conventionally calculated in units of mg/kg-day, the RfCs are converted to inhalation RfDs, in accordance with EPA guidance. The conversion assumes an adult body weight of 70 kg and an inhalation rate of 20 m³/day.

Dermal Reference Doses

EPA has not derived dermal RfDs for any chemicals, but has provided guidance for deriving these values for chemicals for which an oral RfD is available. In accordance with EPA guidance, dermal RfDs are derived by multiplying each oral RfD by an appropriate absorption factor. The absorption factor for PCBs was selected as 100%.

Reference Doses for PCBs

The primary PCB mixtures found at the site are Aroclor 1254 and Aroclor 1260. The Aroclor 1254 RfD was used as a surrogate because there is no current RfD for Aroclor 1260, the predominant PCB mixture believed to be present at the site.

8.1.4 Risk Characterization

In the baseline risk characterization, the results of the toxicity and exposure assessments are summarized and integrated into quantitative and qualitative expressions of potential risk for carcinogenic compounds and into a HI for non-carcinogenic compounds. The baseline risk characterization presents Reasonable Maximum Exposure (RME) and average/central tendency exposures to baseline site conditions in the absence of additional site controls or remediation.

Non-carcinogenic Hazard

The potential for non-carcinogenic effects is evaluated by comparing an exposure level over a specified time period (*e.g.*, life-time) with a reference dose (RfD) derived for a similar exposure period. A RfD represents a level that an individual may be exposed to that is not expected to cause any deleterious effect. The ratio of exposure to toxicity is called a hazard quotient (HQ). An HQ<1 indicates that a receptor's dose of a single contaminant is less than the RfD, and that toxic non-carcinogenic effects from that chemical are unlikely. The Hazard Index (HI) is generated by adding the HQs for all chemicals of concern that affect the same target organ (*e.g.*, liver) or that act through the same mechanism of action within a medium or across all media to which a given individual may reasonably be exposed. An HI<1 indicates that, based on the sum of all HQs from different contaminants and exposure routes, toxic non-carcinogenic effects from all contaminants are unlikely. An HI >1 indicates that site-related exposures may present a risk to human health.

The HQ is calculated as follows:

$$\text{Non-cancer HQ} = \text{CDI/RfD}$$

Where: CDI = chronic daily intake
RfD = reference dose

CDI and RfD are expressed in the same units and represent the same exposure period (*e.g.*, chronic, sub-chronic, or short-term).

Carcinogenic Risk

For carcinogens, risks are generally expressed as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the carcinogen. Excess lifetime cancer risk is calculated from the following equation:

$$\text{ILCR} = \text{CDI} \times \text{SF}$$

Where: ILCR (Incremental Lifetime Cancer Risk) Cancer Risk = a unit-less probability (e.g., 2×10^{-5}) of an individual developing cancer

CDI = chronic daily intake averaged over 70 years (mg/kg-day)

SF = slope factor, expressed as (mg/kg-day)⁻¹.

These risks are probabilities that are expressed in scientific notation (e.g., 10^{-6}). An excess lifetime cancer risk of 1×10^{-6} indicates that an individual experiencing the reasonable maximum exposure estimate has a 1 in 1,000,000 chance of developing cancer as a result of site-related exposure. This is referred to as an “excess lifetime cancer risk” because it would be in addition to the risks of cancer individuals face from other causes such as smoking or exposure to too much sun. The chances of an individual developing cancer from all other causes have been estimated to be as high as one in three. EPA’s acceptable risk range for excess lifetime cancer risk from site-related exposure is 10^{-4} to 10^{-6} .

Risk Characterization Results

Table 8-6 (Appendix 2) summarizes the cancer and non-cancer risk calculated for each study area and exposure scenario by exposure pathway and medium. The five study areas evaluated include:

- Reach A
- Combined Reaches B, C, and D, Brier Creek Reservoir, and Brier Creek
- Lake Crabtree
- Crabtree Creek

Media are designated SS (surface soil), SD (sediment), SW (surface water), and FT (fish file). Where appropriate, the cancer and non-cancer risk from each medium were subtotaled separately, as well as combined to calculate a cancer and non-cancer risk (Hazard Index (HI)) for the total site (all media). Total risks were expressed either in terms of Aroclors or PCB congeners for scenarios that had both types of data available because adding risks for Aroclors and PCB congener TEQs within a given exposure pathway or scenario could potentially result in double counting of PCB exposure since it is known that commercial Aroclor mixtures contain various proportions of these congeners. Risks from any other chemicals were incorporated into the total for both.

The Reach A trespasser scenario exceeded EPA’s risk management range of 1×10^{-4} to 1×10^{-6} cancer risk. The HI (based on Aroclors) was also greater than the noncancer HI management level of one. Cancer risk and HI were dominated by exposure to floodplain surface soils.

The fishermen scenarios had the highest risks (based on PCB congeners) and HIs (based on Aroclors) of all scenarios evaluated.

The swimmer scenarios (Lake Crabtree) had the lowest risks of all scenarios evaluated. Both ILCRs and HIs were consistent with EPA's acceptable risk management range (i.e., ILCR, 1×10^{-6} to 1×10^{-4} ; HI, <1).

The wader scenarios (combined Reaches B, C, and D, Brier Creek Reservoir, and Brier Creek) were also consistent with EPA's acceptable risk management range for ILCR and HI.

8.1.4.1 Risk Characterization Summary

EPA's acceptable cancer risk range for contaminated waste sites is 1×10^{-6} (1 in 1 million) to 1×10^{-4} (1 in 10,000), and the acceptable site HI is one. Based on these criteria, the resident wader is within this acceptable range even if surface water dermal exposure is considered. The swimmer scenario for Lake Crabtree was also within the acceptable risk limits. The largest cancer and non-cancer risks were associated with the consumption of fish filets in the fishing scenarios farther downstream in Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek. These risks, which are summarized in the Table 15, were in general unacceptable, with the possible exception of Crabtree Creek, which had marginal cancer risk and HI excursions.

Table 15 – Carcinogenic Risk Results

RISK SCENARIO	RECEPTOR	CHEMICAL	CARCINOGENIC RISK*	PERCENT OF RISK
Brier Creek Reservoir Eating Fish Filets	Younger Child Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	3.97 E-06 1.10 E-04	4 96
	Adult Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	1.89 E-05 5.25 E-04	4 96
Lake Crabtree Eating Fish Filets	Younger Child Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	6.81 E-06 1.38 E-04	5 95
	Adolescent Child Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	5.47 E-06 1.10 E-04	5 95
	Adult Recreational Fisherman	Dioxin TEQ PCB Aroclor/Congener	3.24 E-05 6.54 E-04	10 90
Crabtree Creek Eating Fish Filets	Adult Recreational Fisherman	Dioxin TEQ PCB Congener	----- 1.50 E-04	100

* For PCB risks, the larger of the Aroclor or congener TEQ risks was selected.

----- No dioxin/furan samples were collected from fish caught in Crabtree Creek

Although some of the risks were associated with exposure to dioxins and furans, over 90% of the risks were associated with PCBs. Because of the high uncertainty levels associated with Aroclors and PCB congeners, it is difficult to determine if risks were overestimated or underestimated. However, the fishing scenarios were associated with high risk levels from PCB contamination, and justify the North Carolina fishing advisories currently in place in Brier Creek Reservoir, Brier Creek, Lake Crabtree, and Crabtree Creek, regardless of the uncertainties.

8.2 Baseline Ecological Risk Assessment (BERA)

A Screening Level Ecological Risk Assessment (SLERA) was prepared and included in the RI report. The Scientific Management Decision Point (SMDP) for the SLERA recommended that a BERA be prepared for this Site. The results of the RI and SLERA indicate that contaminants have migrated from the Ward Transformer facility and that the maximum concentrations detected in a variety of media, including sediments, soil, and water, are at levels that are likely to pose risk to ecological receptors utilizing the affected areas.

Thus, the scope of the BERA is to evaluate impacts of site-related contaminants (i.e., PCB and dioxin-like congeners) on off-site surface waters from Reach A to Crabtree Creek.

8.2.1 Objectives

The primary objectives of the BERA are to:

- Evaluate contaminant levels [primarily polychlorinated biphenyls (PCBs) and dioxin-like PCB congeners] in sediment, floodplain soil, surface water, and fish and invertebrate tissue.
- Assess the potential for adverse impact to ecological receptors, focusing on exposures to avian and terrestrial piscivores and aquatic insectivores.
- Develop conclusions and recommendations for additional investigation or no further action, as appropriate, based on the findings from the BERA.

8.2.2 Problem Formulation

The problem formation establishes the goals, breadth, and focus of the BERA. The problem formulation also establishes assessment endpoints or specific ecological values to be protected. The questions that need to be addressed are defined based on potentially complete exposure pathways and ecological effects. The conceptual exposure model shows the complete exposure pathways evaluated in the BERA and the relationship of the measurement endpoints and the assessment endpoints.

The problem formulation for this site involves identifying the exposure pathways by which the **contaminants of ecological concern (COEC)**, which are primarily PCBs and dioxin-like PCB congeners, have migrated or may migrate from the Ward Transformer facility and ultimately to link these routes of migration to receptors and habitat in, on, and around the Site.

8.2.3 Conceptual Exposure Model

A conceptual site model defines how exposure to constituents might affect an ecosystem. The general taxonomic groups (i.e., terrestrial and aquatic organisms) potentially at risk from exposure at the Ward Transformer Superfund Site and the associated fate and transport mechanisms have been summarized in a conceptual exposure pathway model (Figure 13). This

figure provides a simple graphical representation of the movement of stressors through aquatic/wetland and terrestrial environments and identifies the key ecological components (i.e., target receptor species) and exposure routes that will be evaluated in the BERA.

For the Ward Transformer Superfund Site, it is assumed that complete exposure pathways exist for receptors exposed to both aquatic (surface water, sediment, organisms) and terrestrial (surface soil and organisms) media. The concentrations of PCBs and dioxin-like PCB congeners in sediment, crayfish, and fish tissue samples confirm a complete surface water pathway downstream of the Ward Transformer facility. During sampling and habitat delineation activities, signs of omnivorous mammals such as raccoons were noted and direct observations were made of piscivorous avian receptors including belted kingfisher, great blue heron, and osprey in the riparian area of the unnamed tributary to Little Brier Creek, Brier Creek Reservoir, and Lake Crabtree. The bald eagle, a listed species, is known to nest along Lake Crabtree and to forage in Lake Crabtree and Brier Creek Reservoir. These receptors are expected to forage on invertebrates and/or fish in the impacted reaches. Given the pronounced tendency of PCBs to bioaccumulate, these receptors may be adversely impacted by dietary uptake of contaminants contained in prey.

8.2.4 Assessment Endpoints

Assessment endpoints are defined as explicit expressions of the environmental value that is to be protected. The primary contaminants of concern at this site are PCBs and dioxin-like PCB congeners. Given the presence of PCBs in sediment and soil and the potential for ecological exposure to occur from sediment and soil, a set of assessment endpoints were developed for the purpose of achieving the specific goals of the BERA. The assessment endpoints represent potentially significant impacts to the Ward Transformer Superfund Site ecosystem and are based on their ability to integrate modeled, field, or laboratory data with the individual assessment endpoint. Elevated levels of PCBs in sediment and surface water are known to be toxic to fish and benthic organisms; thus, toxicity to aquatic organisms and benthic invertebrates is proposed as an assessment endpoint for PCBs. The primary ecological threat of PCBs in ecosystems is not through direct exposure or acute toxicity. Instead, PCBs bioaccumulate in food chains and PCBs have been implicated as a cause of reduced reproductive success in piscivorous birds and mammals. Therefore, reduced reproductive success in high trophic level species exposed to contaminants, especially PCBs, in soil and sediment and directly through their diet is another proposed assessment endpoint for the contaminants of concern.

8.2.5 Identification of Target Receptors

The target receptors were selected based on the concept that it is neither feasible nor cost-effective to measure constituent effects on all species inhabiting the aquatic and terrestrial habitat associated with the Ward Transformer Superfund Site. Consequently, target receptors have been selected and are evaluated as surrogate species with a high level of sensitivity and exposure to the constituents of concern at the site. These target receptors were selected to provide the most conservative estimation of exposure for similar species within the same feeding guild. Habitat characterization data, including direct and indirect observations of target receptors in the watershed, were considered in the selection process. Even though the specific target receptors

were selected for evaluation in the BERA, these species are selected to represent exposures that other (similar) species with comparable feeding guilds may be receiving, and thus, serve as “surrogate” receptors. The target receptors are:

- **Benthic Organisms** – Contamination, especially from PCBs, will adversely impact benthic organisms. Thus, the benthic organism population was selected as a receptor group in this BERA.
- **Plants and Soil - Dwelling Organisms** – Contamination, especially from PCBs, can be taken up and bioaccumulated by plants and soil-dwelling organisms. PCBs can also have an adverse impact on soil-dwelling organisms. Thus, the plant and soil-dwelling organism populations were selected as receptor groups in this BERA.
- **Fish Populations** – The effects of PCBs on fish health has been the focus of numerous scientific studies. Thus, the resident fish population was selected as a receptor group in this BERA.
- **Bald Eagle** – The bald eagle (*Haliaeetus leucocephalus*), our national symbol, is a federally designated threatened species (though the bald eagle is proposed for delisting). Bald eagles have been observed along Lake Crabtree and have nested in the immediate vicinity of the lake. They may also be foraging within their home range in Brier Creek Reservoir. The bald eagle was selected as a receptor species because of its status as a threatened species, its position at the top of the food chain, and its piscivorous feeding habits.
- **Great Blue Heron** - The great blue heron (*Ardea herodias*) is a large aquatic bird with a long neck and spear-like bill. Great blue heron inhabit a variety of freshwater and marine habitats, and they have been observed near the site. The blue heron’s main prey items are fish and amphibians, but it will also eat small mammals, reptiles, crustaceans, insects, and birds. The great blue heron was selected as a target receptor species based on its presence at the site and its diet, which may include fish and crayfish.
- **Mink** - The mink (*Mustela vison*) is the most abundant and widespread carnivorous mammal in North America, primarily feeding on fish and crustaceans. Mink are associated with aquatic habitats of all kinds, including rivers, streams, lakes, ditches, swamps, marshes, and backwater areas. Numerous studies have demonstrated that mink are among the most sensitive of the tested mammalian species to the toxic effects of PCBs. The mink was selected as a receptor species because of its PCB sensitivity, its position at the top of the food chain, and its piscivorous feeding habits.
- **Raccoon** - The common raccoon (*Procyon lotor*) is an omnivore, feeding on whatever is most available during a given season. Its diet includes fruits, berries, nuts, acorns, insects, small mammals, birds and their eggs, crayfish, crabs, frogs, turtle eggs, and fish. The raccoon is found throughout the United States, and has been observed at the Site. The raccoon is seldom

found far from water, a fact which influences the local distribution of this species. The raccoon was selected as a receptor species because of its presence at the site and its omnivorous feeding habits, which include consumption of both aquatic and terrestrial plants.

- **American Robin** - Omnivorous birds such as the American robin (*Turdus migratorius*) are an important prey item for higher trophic level predators, and also play an important role in seed dispersal and pollination for many types of terrestrial vegetation. Robins occur throughout most of the continental United States. They are common medium-sized birds that eat worms, insects, and fruits, depending on the season and availability. Although robins are often migratory, some individuals may remain in the same territory throughout the year. The American robin was selected as a receptor species to represent the effects of the site contaminants on an omnivorous bird.
- **Deer Mouse** - The deer mouse (*Peromyscus maniculatus*) is omnivorous and feeds primarily on seeds, arthropods, some green vegetation, roots and fruits, and fungi as available. It lives in a wide variety of habitats. The mouse is nocturnal and is preyed upon by owls, hawks, snakes, and carnivorous mammals. The deer mouse was selected as a receptor species because of its feeding habits and because small omnivorous mammals are an important prey item for higher trophic level predators. They also play an important role in seed dispersal for many types of terrestrial vegetation.

8.2.6 Development of Exposure Point Concentrations

EPCs were developed by environmental medium and by habitat type. Separate EPCs were developed for each environmental medium based on habitat type, with the data grouped into the following habitats:

- Little Brier Creek and Tributaries
- Banks of Little Brier Creek and Tributaries
- Brier Creek Reservoir
- Brier Creek (Below Brier Creek Reservoir)
- Lake Crabtree
- Crabtree Creek

Locations of these habitats are shown in Figure 1.

The maximum detected concentration or a representative average concentration was evaluated as the EPC in quantifying exposure of ecological receptors to each environmental medium (i.e., tissue, surface water, sediment, and bank soil). The representative average EPC is the 95 percent upper confidence limit (95% UCL) on the arithmetic mean. The 95% UCL was calculated using EPA's ProUCL (Version 3.0) software. Data reduction methods were the same as described in the Human Health Risk Assessment. If a chemical was reported as a nondetect in a sample set

(i.e., medium) containing at least one positive identification, it was assumed to be present at one-half the sample quantitation limit (SQL) in all nondetected samples in the calculation of the 95% UCL concentration of the arithmetic mean. For dioxins and furans and for dioxin-like PCB congeners, a 2,3,7,8-TCDD toxic equivalent quotient (TEQ) was calculated using World Health Organization (WHO) toxic equivalency factors (TEFs), as described in the Human Health Risk Assessment. If a given congener was not detected in any samples for that medium, a TEQ was not calculated. If the congener was detected at least once in that medium, the TEQ for samples where it was not detected was determined by multiplying one-half its SQL with its TEF. For a given sample location, the individual congener TEQs were added to obtain a total 2,3,7,8-TCDD TEQ for that sample.

The maximum detected concentrations in whole-body tissue were selected as the EPC for fish and crayfish. The EPCs for tissue are summarized in Table 8-7 (Little Brier Creek and tributaries), Table 8-8 (Brier Creek Reservoir), Table 8-9 (Brier Creek [below Brier Creek Reservoir]), Table 8-10 (Lake Crabtree), and Table 8-11 (Crabtree Creek). Tables are included in Appendix B.

The same fish species were not collected from each reach. Sunfish and bullhead were collected from Little Brier Creek and tributaries; sunfish, bass, and bullhead were collected from Brier Creek Reservoir; sunfish and bullhead were collected from Brier Creek (below Brier Creek Reservoir); sunfish, bass, and catfish were collected from Lake Crabtree; and sunfish, bass, and catfish were collected from Crabtree Creek. Crayfish tissue was collected only from Little Brier Creek and its unnamed tributary, and Brier Creek (below Brier Creek Reservoir). To account for wildlife consuming fish of varying trophic levels, EPCs were selected for both bottomfeeders (represented by bullhead and catfish) and predators (represented by sunfish and bass). If whole body samples were not available for a grouping or concentration in the filet was greater than in the whole body sample in a reach, filet tissue results were used as the EPC. Catfish and bass filet sample results for PCBs (as Aroclors) and PCB congener TEQs were used for Crabtree Creek and bullhead filet results for PCBs (as Aroclors) were used for Brier Creek Reservoir.

The maximum detected concentration in surface water was selected as the EPC. Surface water EPCs are provided in Table 8-12 (Appendix B). Surface water samples were collected only from the Little Brier Creek and tributaries and from Lake Crabtree. PCBs (as Aroclors) were detected in Little Brier Creek; PCBs (as congeners) were not detected in surface water from Lake Crabtree.

For sediment, the maximum detected concentration was used for Brier Creek Reservoir, Brier Creek (below Brier Creek Reservoir), Lake Crabtree, and Crabtree Creek. A maximum and a representative average EPC was used for both the instream sediments from Little Brier Creek and tributaries and for sediment samples collected from the banks. The bank samples included sediment samples collected from the banks of Reaches A, B, and C of Little Brier Creek and tributaries (i.e., not within the main channel). The EPCs for instream sediment and bank sediment are presented in Table 8-13 (Little Brier Creek and Tributaries), Table 8-14 (bank

samples from Little Brier Creek and tributaries), Table 8-15 (Brier Creek Reservoir), Table 8-16 (Brier Creek [below Brier Creek Reservoir]), Table 8-17 (Lake Crabtree), and Table 8-18 (Crabtree Creek). Low level analytical methods were used to analyze PCB congeners in sediments collected in 2005 and 2006; thus, 2005 and 2006 PCB TEQ concentrations were generally lower than PCB TEQ concentrations measured in samples collected in 2003 and 2004.

The maximum detected concentration in floodplain soil was selected as the EPC. The maximum detected floodplain soil samples were collected near Little Brier Creek Reaches A and D, Brier Creek Reservoir, Crabtree Creek, and Lake Crabtree. PCBs (as Aroclors) were not detected in floodplain soil near Crabtree Creek. The EPCs for floodplain soil are presented in Table 8-19.

8.2.7 Estimation of Potential Risks

Wildlife may be exposed to PCBs and dioxins directly or through the food chain. The potential risk to the target ecological receptors is characterized in this subsection.

Benthic Organisms

To assess the potential for adverse effects on benthic organisms from exposure to potentially toxic sediment, the range of detected sediment concentrations was compared to sediment screening benchmarks (Table 8-20, Appendix B). For Little Brier Creek and tributaries, Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek, the HQs exceeded one for PCBs and dioxins. The HQ for dioxins in samples from Brier Creek (below Brier Creek Reservoir) was 1.5; PCBs were not detected in this reach. The 95% UCL concentration of PCBs in sediments of Little Brier Creek and tributaries (17.6 mg/kg) exceeded the highest of the sediment benchmarks [5.3 mg/kg severe effect level].

Although these results show a potential for adverse impacts to benthic organisms from sediment exposure, these risks may be localized at particular “hotspots,” rather than distributed throughout the habitats.

In addition, although congener PCB concentrations in sediment samples from farther downstream reaches (e.g., Crabtree Creek and Brier Creek [below Brier Creek Reservoir]) were all below their respective SQLs, the congener PCB TEQs were calculated using one-half the detection limit for those congeners detected in upstream sediment samples. Sediment samples collected in 2005 and 2006 were analyzed using low level methods, resulting in detection limits that were up to two orders of magnitude lower than the detection limits for the 2003 and 2004 samples. In Crabtree Creek, the maximum PCB TEQ for the 2006 samples was 8.5×10^{-7} mg/kg. In Brier Creek (below Brier Creek Reservoir), the maximum PCB TEQ was 1.1×10^{-6} for the 2006 samples. These concentrations are below the benthic invertebrate screening level of 2.5×10^{-6} mg/kg for dioxins.

Fish and Crayfish

Exposure of fish and crayfish to potentially deleterious concentrations of PCBs and dioxins is evaluated based on a comparison of tissue residues to residue effects concentrations (Table 8-21,

Appendix B). The maximum concentration of PCBs and dioxin TEQs in the whole body tissue for the target species collected were compared to the "tissue no observed effect doses" (NOEDs) and "low observed effect doses" (LOEDs) for similar fish and aquatic invertebrate species. For the bottom-dweller (i.e., omnivorous) fish species, the HQs for PCBs based on the NOED and LOED exceeded one for tissue collected from Little Brier Creek and tributaries. The HQ for PCBs based on the NOED was equal to one for omnivorous fish in Brier Creek Reservoir. For the other habitats, the HQs were less than one, and therefore do not indicate excess risk to omnivorous fish species.

For the predator (i.e., carnivorous) fish species, the HQs for PCBs based on the NOED and LOED for Aroclor 1260 exceeded one in Little Brier Creek and Brier Creek Reservoir. HQs based only on the NOED exceeded one for fish collected from Brier Creek (below Brier Creek Reservoir), Lake Crabtree, and Crabtree Creek. For the predatory fish species, the HQs for dioxins and combined PCB congener and dioxin TEQs were less than one and therefore do not indicate excess risk to carnivorous fish species.

For the crayfish (i.e., aquatic invertebrate), the HQs for PCBs based on the NOED and LOED exceeded one in Little Brier Creek and tributaries. HQs for PCBs based on the NOED exceeded one for crayfish collected from Brier Creek (below Brier Creek Reservoir) and from Crabtree Creek. For the aquatic invertebrate species, the HQs for dioxins and PCB congeners were less than 1.0 and therefore do not indicate excess risk to aquatic invertebrate species. Crayfish were not collected from Brier Creek Reservoir, Lake Crabtree, or Crabtree Creek.

Plants and Soil-Dwelling Organisms

To assess the potential for adverse effects on plants and other soil-dwelling organisms from exposure to potentially toxic soil, the maximum and 95% UCL soil concentrations were compared to soil screening benchmarks (Table 8-22). The HQs for maximum concentration of PCBs in soil on the banks of Little Brier Creek and tributaries exceeded one for plants and other soil-dwelling organisms. For plants, the HQ for the 95% UCL concentration of PCBs in soil did not exceed one, while for other soil-dwelling organisms the HQ exceeded one. For floodplain soils along Little Brier Creek, the HQs for maximum and 95% UCL concentrations of PCBs exceeded one for soil-dwelling organisms but did not exceed one for plants. The single Brier Creek Reservoir floodplain soil sample had a HQ above one for soil-dwelling organisms. PCBs were not detected in Lake Crabtree floodplain soil. A plant and other-soil dwelling organism benchmark was not available for dioxins.

Other Wildlife Species

The potential risks to other wildlife species within each habitat are summarized in this subsection.

Little Brier Creek and Tributaries and Floodplain

The wildlife target receptors evaluated for Little Brier Creek and tributaries were the mink, the heron, the raccoon, the deer mouse, and the robin. The mink may be exposed to contaminants

through the ingestion of fish, sediment, and surface water. The great blue heron may be exposed to contaminants through ingestion of fish and crayfish as well as through incidental ingestion of sediment and surface water. The raccoon may be exposed to contaminants through the ingestion of crayfish, sediment and surface water, as well as through the consumption of plants and soil along the banks of the creek. The deer mouse and robin may be exposed through the ingestion of plants, invertebrates, and floodplain soil. The potential risks to the mink, heron, raccoon, deer mouse, and robin are summarized in Table 8-23(Appendix B).

The no effect and low effect HQs for PCBs exceeded one for the mink, heron, and raccoon using both the maximum and average (i.e., 95% UCL) exposure point concentrations (EPCs) for sediment. For the maximum sediment EPC, the HQ ranged from 43 to 8.8 for the mink, 38 to 3.8 for the heron, and 10 to 2.7 for the raccoon. For the average sediment EPC, the HQ ranged from 43 to 8.8 for the mink, 36 to 3.6 for the heron, and 9.7 to 2.6 for the raccoon. This risk is primarily associated with the consumption of contaminated prey.

For the maximum sediment EPC, the no effect and low effect HQs for the PCB congener TEQ exceeded one, ranging from 100 to 10 for the mink, from 56 to 5.6 for the heron, and from 350 to 35 for the raccoon. For the average sediment EPC, the no effect HQs for the PCB congener TEQ exceeded one for the mink, heron, and raccoon, while the low effect HQs exceeded one only for the mink and raccoon. The PCB congener no effect HQs were 51 for the mink, 9.1 for the heron, and 210 for the raccoon, and the low effect HQs were 5.1 for the mink, 0.91 for the heron, and 21 for the raccoon. These risks from PCB congener TEQs are also primarily through food consumption. For the maximum EPC, the no effect HQ for the dioxin TEQ exceeded one only for the mink (1.7). Thus, PCBs and dioxin-like PCB congeners pose a risk to wildlife species along the Little Brier Creek and tributaries, especially through the consumption of contaminated prey and sediment.

The no effect and low effect HQs exceeded one for the deer mouse and robin inhabiting floodplain soils and are primarily associated with the consumption of contaminated prey. Thus, PCBs pose a risk to the deer mouse and robin inhabiting the floodplain along Little Brier Creek.

Banks of Little Brier Creek and Tributaries

The wildlife target receptors evaluated for the riparian area along the banks of Little Brier Creek and tributaries were the robin and deer mouse. The robin and deer mouse may be exposed to contaminants through the ingestion of plants, earthworms, and soil along the banks of the creek. They may also consume surface water from the creek. The potential risks to the robin and deer mouse are summarized in Table 8-24 (Appendix B).

The no effect and low effect HQs for PCBs exceeded one for both the robin and the deer mouse using both the maximum and average soil concentrations. For the maximum soil EPC, the HQ ranged from 8,700 to 870 for the robin and from 4,400 to 880 for the deer mouse. For the average soil EPC, the HQ ranged from 4,200 to 420 for the robin and from 2,100 to 430 for the deer mouse. These risks are primarily associated with the consumption of contaminated earthworms

that have bioaccumulated PCBs. The no effect and low effect HQs for the PCB congener TEQ and the dioxin/furan TEQ also exceeded one for the robin and deer mouse, again primarily through food consumption. For the maximum soil EPC, the PCB-congener TEQ HQs ranged from 190,000 to 19,000 for the robin and from 1,000,000 to 100,000 for the deer mouse. For the average soil EPC, the PCB-congener TEQ HQs ranged from 47,000 to 4,700 for the robin and 610,000 to 61,000 for the deer mouse. For the maximum soil EPC, the dioxin/furan TEQ HQs ranged from 250 to 25 for the robin and from 970 to 97 for the deer mouse. For the average soil EPC, the dioxin/furan TEQ HQs ranged from 120 to 12 for the robin and from 460 to 46 for the deer mouse. Thus, PCBs, dioxin-like PCB congeners, and dioxin/furans pose a risk to terrestrial wildlife species which may consume contaminated prey along the banks of Little Brier Creek and tributaries.

Brier Creek Reservoir and Floodplain

The wildlife target receptors evaluated for Brier Creek Reservoir and the associated floodplain were the mink, the heron, the eagle, the deer mouse, and the robin. The mink, heron, and eagle may be exposed to contaminants through the ingestion of fish and sediment. The deer mouse and robin may be exposed through the ingestion of plants, invertebrates, and soil. The potential risks to the mink, heron, eagle, deer mouse, and robin are summarized in Table 8-25.

The no effect HQs for the mink exceeded one for PCB (3.8) and the PCB congener TEQ (18). This risk is primarily associated with the consumption of contaminated prey. The low effect HQs for the mink did not exceed one for PCBs but did exceed one for PCB congener TEQ (1.8). Thus, dioxin-like PCB congeners pose a risk to the mink and PCBs pose a potential risk to the mink. The no effect HQs for the heron and the eagle equal one, indicating little to no risk to these species. The no effect HQs exceeded one for the deer mouse and robin inhabiting floodplain soils and is primarily associated with the consumption of contaminated prey. The low effect HQs for these two receptors did not exceed one, indicating a potential risk from PCBs in floodplain soil.

Brier Creek (Below Brier Creek Reservoir)

The wildlife target receptors evaluated for Brier Creek (below Brier Creek Reservoir) were the mink, the heron, and the raccoon. The mink may be exposed to contaminants through the ingestion of fish and sediment. The great blue heron may be exposed to contaminants through ingestion of fish and crayfish as well as through incidental ingestion of sediment. The raccoon may be exposed to contaminants through the ingestion of crayfish and sediment. The potential risks to the mink, heron, and raccoon are summarized in Table 8-26 (Appendix B).

The no effect HQs for the mink (6.8) and the raccoon (3.8) exceeded one for the PCB congener TEQ. This risk is primarily associated with the consumption of contaminated prey. The low effect HQs for the mink and raccoon did not exceed one. Thus, dioxin-like PCB congeners pose a potential risk to the mink and raccoon. The no effect HQs for the heron do not exceed one, indicating little to no risk to this species. The no-effect HQs for PCBs (as Aroclors) did not exceed one for any species.

Lake Crabtree and Floodplain

The wildlife target receptors evaluated for Lake Crabtree were mink, heron, eagle, deer mouse, and robin. The mink, heron, and eagle may be exposed to contaminants through the ingestion of fish and sediment. The deer mouse and robin may be exposed through the ingestion of plants, invertebrates, and soil. The potential risks to the mink, heron, eagle, deer mouse, and robin are summarized in Table 8-27. (Appendix B)

The no effect HQs for the mink exceeded one for the PCB congener TEQ (5.4 for congener TEQ and 1.2 for Aroclor 1260). This risk is primarily associated with the consumption of contaminated prey. The low effect HQs for the mink did not exceed one. The no effect and low effect HQs exceeded one for the deer mouse inhabiting floodplain soils and is primarily associated with the consumption of contaminated prey. Thus, PCBs and dioxin-like PCB congeners pose a potential risk to the mink and dioxin-like PCBs pose a potential risk to the deer mouse. The no effect HQs for the heron, eagle, and robin do not exceed one, indicating little to no risk to these species.

Crabtree Creek

The wildlife target receptors evaluated for Crabtree Creek were the mink, the heron, and the raccoon. The mink may be exposed to contaminants through the ingestion of fish and sediment. The great blue heron may be exposed to contaminants through ingestion of fish and crayfish as well as through incidental ingestion of sediment. The raccoon may be exposed to contaminants through the ingestion of crayfish and sediment. The potential risks to the mink, heron, and raccoon are summarized in Table 8-28.

The no effect HQs for the mink (1.6) and heron (1.9) exceeded one for the PCB congener TEQ. The no effect HQ for the heron (2.2) exceeded one for PCBs. This risk is primarily associated with the consumption of PCB-contaminated prey by the mink and heron and consumption of sediment by the heron. The low effect HQs for the mink and heron did not exceed one. Thus, dioxin-like PCB congeners pose a potential risk to the mink and heron, and PCBs pose a potential risk to the heron. The no effect HQs for the raccoon do not exceed one, indicating little to no risk to this species.

While sediment samples collected from Crabtree Creek in 2003/2004 were all below their respective SQLs, the congener PCB TEQs were calculated using one-half the detection limit for those congeners detected in upstream sediment samples. Sediment samples collected in 2005 and 2006 were analyzed using low level methods, resulting in detection limits that were up to two orders of magnitude lower than the detection limits for the 2003 and 2004 samples. In Crabtree Creek, the maximum PCB TEQ for the 2006 samples was 0.02 ng/kg while the maximum concentration for the 2003/2004 samples was 250 ng/kg. Thus, the actual concentrations of PCB congeners in Crabtree Creek sediments may be lower, resulting in lower risk from sediment ingestion by the heron.

8.2.8 Conclusion Summary

The BERA was prepared to evaluate the ecological risks associated with site-related contamination in off-site surface water bodies downstream of the Ward Transformer facility. Results of the BERA indicate that the maximum concentrations detected in a variety of environmental media are at levels that are likely to pose risk to ecological receptors utilizing the affected areas. Potentially unacceptable levels of risk to benthic organisms, fish, and aquatic organisms were estimated in Little Brier Creek and tributaries. The impacted bank sediments also pose a risk to terrestrial receptors that forage along the creek.

Although PCB concentrations in fish and crayfish in the upper reaches of the Little Brier Creek watershed are higher, whole body samples of fish from the Lake Crabtree and Crabtree Creek also indicate uptake of PCBs; demonstrating that the surface water/sediment exposure pathway is complete and current contaminant concentration may pose risk to fish-eating mammals and/or birds. The BERA concluded that there is a limited potential for risk to carnivorous birds and mammals foraging in Brier Creek Reservoir, Brier Creek, Lake Crabtree, and Crabtree Creek due predominantly to the consumption of aquatic biota containing PCBs. The hazard quotient (HQ) analysis also indicated limited risk to benthic organisms, fish, and aquatic invertebrates in these water bodies.

The documented and potential presence of threatened and/or endangered species within the impacted watershed requires additional consideration. The state endangered Atlantic pigtoe mussel and the state threatened squawfoot mussel have been reported in the nearby Umstead State Park, which is part of the Crabtree Creek watershed. These species could potentially be present in the unnamed tributary to Little Brier Creek. In addition, endangered bald eagles are nesting at Lake Crabtree and foraging at Lake Crabtree and Brier Creek Reservoir. The presence of threatened or endangered species could affect potential remedial alternatives considered for the Site. If remedial actions are planned for stream sediments, a mussel survey should be conducted to determine if endangered mussel species are present in the unnamed tributary to Little Brier Creek. If endangered species are present, potential impacts associated with remediation will require evaluation for measures to minimize or eliminate such impacts.

9.0 REMEDIAL ACTION OBJECTIVES

Based upon the findings of the RI, community and stakeholder input, and associated human health and ecological baseline risk assessments, the following Remedial RAOs were identified for OU1:

- Minimize potential downstream migration of PCB-contaminated soil and sediment.
- Reduce PCB levels in fish tissue to levels that allow for unlimited consumption.

Human Exposure:

Eliminate or minimize potential risks to human health due to consumption of contaminated fish from Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek.

- Eliminate or minimize human exposure to consumption of contaminated fish from Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek, by reducing PCB concentrations in fish tissue to levels that allow for unlimited consumption.

Eliminate or minimize potential human exposure from direct contact with contaminated sediment and floodplain soil in Reaches B, C, and D, and lower Brier Creek by reducing the PCB concentrations to a protective level.

Ecological Exposure:

- Eliminate or minimize potential risks to ecological receptors due to consumption of contaminated fish from Reach B, Reach C, Reach D, lower Brier Creek, Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek, by reducing PCB concentrations in fish tissue to levels that allow for unlimited consumption.
- Eliminate or minimize potential risks to ecological receptors due to direct contact with contaminated sediment and floodplain soil in Reaches B, C, and D, and lower Brier Creek by reducing the PCB concentration to a protective level.

In the ecological risk assessment, risk-based remediation goals for ecological receptors were calculated for the tributary to Little Brier Creek, Little Brier Creek, and Brier Creek Reservoir; the areas where most of the ecological risks were identified. Based on these ecological goals, it was determined that the human health RAOs for direct contact with sediment and fish consumption would also be protective of the primary ecological receptors (i.e., bald eagles, herons, raccoons, and mink). Therefore, once the PCB concentrations protective of human health are attained in sediment and fish tissue, the ecological risk goals should also be met. Consequently, from this point forward the primary factors driving the OU1 remediation is the human health risks associated with fish consumption and dermal contact with PCB contaminated sediment.

9.1 Remediation Goals

Based on the risk assessment conclusions, there are two distinct risks to humans from PCBs within OU1. The first is the exposure to PCBs in sediments and flood plain soil through direct human contact in Reaches B, C, and D, and lower Brier Creek. The second risk is associated with consumption of fish from Brier Creek Reservoir, Lake Crabtree, and lower Crabtree Creek. The State of North Carolina is expected to lift current fish consumption advisories in the future once PCB concentrations in fish drop to acceptable levels. Because attaining PCB levels acceptable

for fish consumption is typically more stringent and much more difficult to achieve than PCB levels in sediments, fish consumption was considered as the primary driving factor for developing Remediation Goals (RG) and remedial action alternatives for OU1.

During the development of cleanup goals for OU1, two distinct areas were addressed separately because of their use scenarios and physical nature. The first area consists of Reaches B, C, and D, and lower Brier Creek (between the Brier Creek Reservoir and Lake Crabtree). These are streams with dimensions varying from 8 to 30 ft in width and from 3 to 6.5 ft in bank height. The small size and depth of the streams (Reaches B, C, and D) located upstream of the impoundment by the Brier Creek Reservoir Dam limit their use as a recreational fishery. The water bodies in the second area consist of lower Crabtree Creek and the surface water impoundments within OU1 (located downstream of Reach D), Brier Creek Reservoir and Lake Crabtree. These areas support fishing activities.

Remediation Goal for Sediment and Floodplain Soil along Reaches B, C, and D and Lower Brier Creek

Potential OU1 remedial action cleanup goals for PCB-contaminated sediments in Reaches B, C, and D and in lower Brier Creek were evaluated as part of the Feasibility Study. Of the potential sediment/soil cleanup goals evaluated, 1 mg/kg was selected as the final sediment/soil cleanup goal for these areas of OU1, based on the following reasons:

- 1 mg/kg was determined to be protective for risk scenarios involving human contact with sediment and flood plain soil in B, C, D, and lower Brier Creek.
- A Geographic Information System (GIS) computer model, EPA's Pollutant Load Application (PLOAD) model, was employed to estimate sediment loads and PCB sediment concentrations entering Lake Crabtree and Brier Creek Reservoir from their respective watersheds. Results from model scenarios indicated that a 1 mg/kg cleanup goal for sediment in Reaches B, C, D, and lower Brier Creek combined with clean (no detected PCBs) sediment from upstream portions of the upper Brier Creek and Little Brier Creek watersheds would result in sediment loads entering Brier Creek Reservoir and Lake Crabtree at a PCB concentration in the low ppb range (less than 10 ppb). As discussed below, PCB concentrations in sediments at both the Brier Creek Reservoir and Lake Crabtree would need to be reduced to less than 10 ppb to reach the North Carolina risk-based fish tissue goal of 0.05 mg/kg for unlimited fish consumption.
- 1 mg/kg was previously selected as the sediment and floodplain soil cleanup goal for Reach A under the ongoing removal action.

Remediation Goal for Fish at Reaches B, C, and D, Brier Creek Reservoir, Lower Brier Creek Lake Crabtree and Crabtree Creek

The goal is to attain edible fish tissue concentrations that would allow current fish consumption advisories for these water bodies to be lifted in the future. There are no established regulatory criteria or standards for PCBs in sediments associated with fish consumption. However, the

North Carolina Division of Public Health has established fish consumption advisory levels for contaminants found in fish tissue. For PCBs, the maximum allowable PCB concentration in fish tissue is 0.05 mg/kg. At levels greater than 0.05 mg/kg, fish consumption advisories that limit consumption of fish may be issued by the State.

Biota-to-Sediment Accumulation Factors (BSAFs) calculations were employed to estimate the maximum allowable PCB concentrations in sediments at the Brier Creek Reservoir and Lake Crabtree necessary to achieve the North Carolina fish consumption advisory level of 0.05 mg/kg in fish for unlimited fish consumption. Using this target value as an input parameter in conjunction with the site-specific BSAFs derived from fish tissue PCB and lipid data and sediment PCB and total organic carbon data, maximum allowable sediment concentrations were estimated for several different fish species, including largemouth bass, catfish, and sunfish. The results indicated that PCB concentrations in sediments at both the Brier Creek Reservoir and Lake Crabtree would need to be reduced to the low-ppb range (i.e., less than 10 ppb) to reach the risk-based fish goal. But, regardless of how the sediment concentration would get, the risk-based fish goal for PCB is 0.05 mg/kg.

10.0 DESCRIPTION OF ALTERNATIVES

As required in the NCP, remedial alternatives were developed and remedial technologies were screened for effectiveness, implementability and cost. After screening, the remedial alternatives described in this section were retained for evaluation. More details about the alternatives and evaluation process are described in the Feasibility Study (FS) report. The FS report is part of the administrative record for the Site.

Alternative 1 – No Action

- *Assumes no action to be taken.*
- *Conduct five-year reviews.*

The No Action alternative is evaluated as required by law to serve as a baseline for other alternatives. Under the No Action alternative, no remedial actions would be implemented at the Site. The existing site conditions would continue to remain in place without any active remediation technologies or institutional controls. Risks posed by PCB contamination under future scenarios would likely remain for an extended period of time.

Although the State of North Carolina has already issued fish consumption advisories, and EPA, the State of North Carolina, and Wake County, have fish consumption signs already in place; for the purpose of this evaluation, it is assumed that the fish advisories and signs are not part of the No Action alternative. The No Action alternative would only include a review of the remedy every 5 years for 30 years (five year reviews). The cost included is for conducting the five year reviews.

Capital Costs: \$ 0
O & M Costs (Present Worth): \$ 280,000
Contingency Costs: \$ 42,000
Total Present Worth Costs: \$ 322,000
Duration to Finish Construction: Immediate

Alternative 2 - Institutional Controls

- ***Continue or enhance existing North Carolina fish consumption advisories and signs.***

Under this alternative, the North Carolina fish consumption advisories and signs would continue to remain in effect. The continued implementation of fish advisories and signs would reduce the potential risks to humans through fish consumption.

- ***Implement educational and community outreach programs.***

Community outreach and public educational programs would be developed and implemented to inform the public of the risks associated with fish consumption. This would include posting fish advisories signs, conducting meetings, distributing pamphlets, etc. These efforts would focus on groups such as sports fisherman and local communities that rely on fish consumption for part of their diet.

- ***Conduct five-year reviews.***

Five-year reviews will also be conducted as required by CERCLA.

Capital Costs: \$ 0
O & M Costs (Present Worth): \$ 414,000
Contingency Costs: \$ 62,000
Total Present Worth Costs: \$ 476,000

Duration to Finish Construction: Immediate

Alternative 3 - Monitored Natural Recovery (MNR) and Institutional Controls

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Implement educational and community outreach programs.
- Conduct five-year reviews.

Under Alternative 3 the components of Alternative 2 would be implemented in addition to MNR would be used to document achievement of the RAOs for OU 1.

▪ ***MNR and periodic monitoring of sediment and aquatic biota.***

MNR is a sediment remedy that uses ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment, thereby reducing potential risks to human and/or ecological receptors. MNR is especially effective at sites such as this where the main source of contamination would be removed (on-going removal action at Reach A and the Ward Transformer facility).

Current levels of PCBs in sediment samples within OU1 are low enough that continued burial, dispersion, and mixing-in-place alone would reduce the PCB concentrations in sediment significantly, even without the destruction or transformation of PCBs.

An MNR sampling program would be developed and implemented in accordance with EPA sediment guidance for evaluating Natural Recovery remedies, to document lines of evidence of natural recovery at this Site. Periodic monitoring of sediment would be conducted to enable assessment of PCB concentrations in sediment over time. In addition, monitoring of aquatic biota (fish sampling) would be conducted to support future decisions regarding fish consumption advisories, and protection to ecological receptors.

Capital Costs:	\$ 0
O & M Costs (Present Worth):	\$ 1,954,000
Contingency Costs:	\$ 293,128
Total Present Worth Costs:	\$ 2,247,000

Duration to Finish Construction:	Immediate
Estimated Time to Achieve RAOs:	More than 30 years

Alternative 4 – Excavation and Off-Site Disposal of Sediment from Reaches B, C, D, and Lower Brier Creek; MNR in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; and Institutional Controls

- ***Continue or enhance existing North Carolina fish consumption advisories and signs.***
- ***Implement educational and community outreach programs.***
- ***Conduct Five-year reviews.***

Under Alternative 4, the components of Alternative 2 would be implemented in addition to MNR of sediments in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; excavation and off-site disposal of PCB contaminated sediment from Reaches B, C, D and Lower Brier Creek; conduct a pre-excavation sampling program and an endangered mussel study; excavation and off-site disposal of PCB contaminated sediment from Reaches B, C, D, and Lower Brier Creek; and, conduct periodic monitoring of sediment and aquatic biota.

▪ ***MNR in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek***

Like Alternative 3 MNR would be a component of this alternative to reduce PCB levels in sediment. However, it would only apply to sediment in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.

▪ ***Conduct pre-excavation sampling of sediment and endangered mussel study.***

A pre-excavation sediment sampling program would be conducted to more accurately define the limits of excavation areas along Reaches B, C, D, and lower Brier Creek. In addition a mussel survey would also be conducted to determine if threatened/endangered mussel species are present in the selected excavation areas.

▪ ***Excavate sediment from Reaches B, C, D and lower Brier Creek, and transport sediments off-site for appropriate disposal.***

Based on the results of the pre-excavation sampling program, sediment with PCB concentrations above 1 mg/kg would be excavated from Reaches B, C, D, and lower Brier Creek. Sediment would be disposed off-site in the appropriate landfill.

Precautions will be taken to minimize any impact on identified local endangered and threatened species. Also, activities will be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks, construction, and erosion and sediment control.

▪ ***Restore site and stream to pre-remediation conditions.***

Stream restoration would be performed once the contaminated sediment is removed.

▪ ***Conduct periodic monitoring of sediment and aquatic biota.***

Periodic monitoring of sediment would be conducted to enable assessment of PCB concentrations in sediment over time. In addition, monitoring of aquatic biota (fish sampling) would support future decisions regarding fish consumption advisories and protection of ecological receptors.

Capital Costs:	\$ 3,080,000
O & M Costs (Present Worth):	\$ 1,258,000
Contingency Costs:	\$ 651,000
Total Present Worth Costs:	\$ 4,989,000

Estimated Construction Timeframe: 5 months

Estimated Time to Achieve RAOs: 14 years after construction is completed

Alternative 5 - Excavation of Sediment in Reaches B, C, D, and Lower Brier Creek; Excavation/Dredging of Sediment from Brier Creek Reservoir and Lake Crabtree; Off-Site Disposal of Sediment/Soil; MNR in Lower Crabtree Creek and Institutional Controls

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Implement educational and community outreach programs.
- Conduct Five-year reviews.
- Conduct periodic monitoring of sediment and aquatic biota.
- Conduct pre-excavation sampling of sediment and endangered mussel study.
- Excavate sediment from Reaches B, C, D, and lower Brier Creek, and transport sediment off-site for appropriate disposal.
- Restore site and stream to pre-remediation conditions.
- *MNR in Lower Crabtree Creek*

Alternative 5 includes all the components of Alternative 4 in addition to dredging sediment from Brier Creek Reservoir and Lake Crabtree, and transport sediment off-site for appropriate disposal. MNR in this alternative would only be implemented in Lower Crabtree Creek.

- *Dredge sediment from Brier Creek Reservoir and Lake Crabtree, and transport sediment off-site for appropriate disposal.*

In this alternative sediment in the Brier Creek Reservoir and Lake Crabtree would be dredged and transported off-site for disposal.

PCB levels detected in Brier Creek Reservoir and Lake Crabtree are already in the low part per million (ppm) ranges. Therefore, for the purpose of this alternative, it is assumed that all of the sediment in Brier Creek Reservoir and Lake Crabtree would have to be removed to ensure that the availability of very low PCB levels is completely eliminated for ecological receptors.

Precautions will be taken to minimize any impact on identified local endangered and threatened species. Also, activities will be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks, construction, and erosion and sediment control.

Capital Costs:	\$ 468,910,000
O & M Costs (Present Worth):	\$ 1,509,000
Contingency Costs:	\$ 70,563,000
Total Present Worth Costs:	\$ 540,982,000

Estimated Construction Timeframe: 3 years

Estimated Time to Achieve RAOs: 12 years after construction is completed

11.0 COMPARATIVE ANALYSIS OF ALTERNATIVES

In this section, each alternative is assessed using nine evaluation criteria required under the NCP (NCP§300.430 (f)(5)(i)). Comparison of the alternatives with respect to these evaluation criteria is presented in summary form in the text of this section.

The NCP Criteria

Each alternative is evaluated using the nine criteria below:

1. Overall protection of human health and the environment
2. Compliance with Applicable or Relevant and Appropriate Requirements
3. Long-term effectiveness and permanence
4. Reduction of toxicity, mobility, or volume through treatment
5. Short-term effectiveness
6. Implementability.
7. Cost.
8. State/support agency acceptance
9. Community acceptance.

The required nine evaluation criteria above serve as the basis for conducting a comparative detailed analysis and selecting the remedy. The comparison is summarized by evaluation criteria in the next paragraphs.

- 1. Overall Protection of Human Health and the Environment** - Overall protection of human health and the environment addresses whether each alternative provides adequate protection of human health and the environment and describes how risks posed through exposure pathway are eliminated, reduced, or controlled through treatment, engineering controls, and/or institutional controls.

Alternative 1 would not be protective of human health or the environment because there are no actions to reduce or prevent exposure to contamination at OU 1. As such Alternative 1 is eliminated from consideration under the remaining eight criteria.

Alternative 2 and 3 would be more protective than Alternative 1 because implementation of fish advisories and signs reduce human exposure to contaminated fish. In addition through educational and community outreach programs the public is informed about the fish consumption advisories and the risks of consuming PCB-contaminated fish.

Alternatives 4 and 5 are more protective of the human health and the environment than Alternative 3, because these alternatives remove contaminated sediment with concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek, therefore reducing potential exposure to sediments with concentrations above this level. Modeling results show that

excavating sediment with PCB concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek will accelerate the natural recovery processes in sediment at Brier Creek Reservoir and Lake Crabtree.

Alternative 5 provides the greatest overall protection to human health and the environment because it would also remove contaminated sediment in Brier Creek Reservoir and Lake Crabtree. As a result, the time required to achieve the fish tissue PCB concentrations after completion of planning and construction activities may be less than the timeframe required in Alternative 4. However, due to the complexity of Alternative 5, the total time required for planning, design and implementation of this alternative would be considerable greater than Alternative 4.

With regards to protection of the environment, Alternative 3 may take a long time to achieve clean up goals. Alternatives 4 and 5 will achieve clean up goals in a shorter period of time than Alternative 3, but would destroy/disturb the habitat and aquatic biota in segments of the remediated streams in Alternatives 4 and 5, and the reservoir and lake areas in Alternative 5. Alternative 5 could also adversely impact threatened bald eagles foraging and breeding in the reservoir and lake areas. Therefore, the benefits of removing sediments must be weighed against the disruption or destruction of aquatic and biota habitats in and around the streams.

- 2. Compliance with ARARs** - Section 121(d) of CERCLA and NCP section 300.430(f)(1)(ii)(B) require that remedial actions at CERCLA sites at least attain legally applicable or relevant and appropriate Federal and State requirements, standards, criteria, and limitations which are collectively referred to as "ARARs," unless such ARARs are waived under CERCLA section 121(d)(4).

Alternative 2 would not meet the Chemical-specific ARARs because institutional controls prevent or minimize exposure, however, they do not reduce contamination to remediation goals

In Alternative 3, the chemical-specific ARAR of 1 mg/kg for PCBs may be met in the long-term for sediments in Reaches B, C, D, and lower Brier Creek through natural recovery processes. In Alternatives 4 and 5, chemical-specific ARARs of 1 mg/kg for sediments in Reaches B, C, D and lower Brier Creek will be met after excavation activities are completed.

Action-specific ARARs are not relevant for Alternatives, 2, and 3 because there are no active remedial actions associated with these alternatives. In Alternatives 4 and 5, all applicable action-specific ARARs would be met during the remedial actions. Measures will be taken to minimize any dust during excavation activities. In addition, for Alternative 5, any NPDES permit requirements will be met, if water from dewatering operations requires treatment prior to being discharged.

Location-specific ARARs are not relevant for Alternatives, 2, and 3 because there are no active remedial actions associated with these alternatives. In Alternatives 4 and 5, applicable location-

specific ARARs would be met. Precautions will be taken to minimize any impact on identified local endangered and threatened species. Also, activities will be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks (Umstead Park), construction, and erosion and sediment control.

3. Long-term Effectiveness and Permanence - Long-term effectiveness and permanence refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once clean-up levels have been met. This criterion includes the consideration of residual risk that will remain on site following remediation and the adequacy and reliability of controls.

In Alternatives 2, 3, 4 and 5, potential risks associated with fish consumption are expected to be lower because of the fish consumption advisories and signs.

In Alternative 3, risks to humans and the environment are expected to gradually decrease over time with the reduction of PCB concentrations in sediment through natural processes and will be documented by a long term monitoring program. PCB concentrations in fish are also expected to decline with the decrease of PCB concentrations in sediment.

In Alternatives 4 and 5, the removal of sediments to levels below 1 mg/kg PCB from Reaches B, C, D, and lower Brier Creek will reduce any potential risks associated with sediment exposure. In Alternative 4, once the sediments with PCB concentrations above 1 mg/kg are removed from these areas, the natural recovery process of Brier Creek Reservoir, Lake Crabtree, and beyond would speed up.

In addition to sediment removal from the streams, Alternative 5 would also remove sediments in Brier Creek Reservoir and Lake Crabtree. As a result, the time required to achieve acceptable fish tissue PCB concentrations after completion activities may be less than the timeframe required in Alternative 4. However, due to the complexity of Alternative 5, the total time required for planning, design and implementation of this alternative would be considerable greater than Alternative 4.

In Alternative 5, if dredging is used, due to technology limitations, some dredging residuals levels will remain in the reservoir and lake, including low levels of PCB contamination in the biologically active sediment zone. PCBs in dredging residuals could impact fish concentrations in the reservoir and lake for many years after completion of the dredging operations.

In addition, the large-scale excavation/dredging operations in Brier Creek Reservoir and Lake Crabtree in Alternative 5 will disturb or destroy benthic and other aquatic biota and habitats in the reservoir and the lake. The dredging/excavation activities of Alternative 5 could adversely impact threatened bald eagles within the reservoir and lake areas for foraging and breeding. Over the long term, re-establishments of these habitats may be difficult.

4. **Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment** refers to the anticipated performance of the treatment technologies that may be included as part of the remedy.

EPA will use treatment to address site contaminants wherever practicable; however, because of the relatively low levels of PCBs in the sediments within OU1, treatment is not proposed for any of the alternatives. Therefore the statutory preference for treatment is not met.

5. **Short-term Effectiveness** addresses the period of time needed to implement the remedy and any adverse impacts that may be posed to workers, the community and the environment during construction and operation of the remedy until cleanup levels are achieved.

Alternatives 2 and 3 do not involve any active remedial action; therefore, they would not pose any additional risks to the community or workers during implementation, nor would they result in any adverse environmental impacts.

In Alternative 3, under current conditions (assuming that the Removal Action at the Ward Transformer facility and Reach A is completed before commencement of OU1 activities), modeling indicates that PCB concentrations in sediments at Brier Creek Reservoir and Lake Crabtree may take more than 30 years to decline to levels that correspond to acceptable PCB levels in fish.

In Alternatives 4 and 5, the potential for additional risks to the community may exist due to dust and excessive noise from the construction of access roads, construction equipment, and vehicular traffic to the off-site disposal facility. Risks to the community will be minimized by establishing buffer zones around the work areas, limiting work hours, and using dust-suppressing techniques. Risks to the environment may include clearing of vegetation and trees for access roads and excavation/dredging equipment. Measures will be taken to minimize the impact on the environment by avoiding the wetlands and floodplain areas to the extent possible. There will be adverse impacts to the stream and lake habitats due to the sediment removal activities, especially for benthic and other aquatic organisms. Many of these organisms may be disturbed or destroyed during the excavation/dredging activities. The presence or absence of threatened or endangered mussel species needs to be established prior to commencing intrusive activities. If threatened or endangered mussel species are identified, additional safeguards will need to be put into place to protect these species. In addition, the potential for adverse impacts to threatened bald eagles utilizing areas within OU1 as foraging and breeding habitat exists and precautions would be required to minimize these potential impacts. Due to the larger extent and complexity of excavation/dredging activities associated with Alternative 5, all the above-mentioned impacts will be much greater for Alternative 5 than Alternative 4.

In Alternative 4, the estimated time required to complete the remediation work is 3 to 5 months. The estimated time required to attain acceptable PCB concentrations in fish tissue at the Brier

Creek Reservoir is approximately 14 years. The time required to attain acceptable PCB concentrations in fish tissue at Lake Crabtree is approximately 9 years.

Due to the complexity of Alternative 5, it is estimated that planning, design and implementation of this alternative would require a considerably greater amount of time than Alternative 4. In addition, it is estimated that any dredging activities associated with Alternative 5 would take at least 3 years to complete after all design and planning documents are completed.

In Alternative 5, the estimated time required to attain acceptable PCB concentrations in fish tissue at the Brier Creek Reservoir is approximately 12 years after the completion of excavation/dredging. The time required to attain acceptable PCB concentrations in fish tissue at Lake Crabtree is expected to be 8 years.

As a result, removing larger amounts of sediments in Alternative 5 does not necessarily correspond to a shorter amount of time to achieve clean up goals than in Alternative 4.

6. Implementability addresses the technical and administrative feasibility of the remedy from design to construction and operation. Factors such as the relative availability of services and materials, administrative feasibility, and coordination with other government entities are also considered.

Alternatives 1, 2, and 3 can be easily implemented because there is no construction, involved. Alternatives 1 and 2 can be easily implemented because there are no monitoring activities.

In Alternatives 2, 3, 4 and 5, the North Carolina fish consumption advisories and signs are already in place although additional advisories and signs may be necessary. In Alternatives 3, 4 and 5, reduction in PCB concentrations in sediment and fish will be determined through the periodic monitoring program, which can be easily implemented.

Alternative 4 is technically feasible to implement. Contractors are readily available for construction of access roads, excavation, and off-site disposal. Coordination with other agencies and obtaining approvals and permit equivalencies for excavation, transport of excavated materials, etc. will be required.

The implementation of Alternative 5 is much more complex and difficult than Alternative 4, and it will require much more time. In addition to all the components that are included in Alternative 4, dredging of sediments at Brier Creek Reservoir and Lake Crabtree is included in Alternative 5. Dredging is a specialized technology, which requires advanced planning, selection of the proper dredging method, and detailed remedial design. Dewatering and treatment of water are also significant design and cost components of the dredging alternative.

During the implementation of Alternatives 4 and 5, a pre-remediation mussel study will be conducted to determine if the endangered/threatened species exists in the streams to be

excavated. Consultation with the respective federal and state agencies will be required prior to the commencement of the excavation activities.

Some portions of OU1 consist of wetlands and floodplains. Coordination with federal agencies will be required to ensure that the impact on these areas will be minimal. Threatened bald eagles nest at Lake Crabtree and forage at Lake Crabtree and Brier Creek Reservoir. State endangered/threatened mussel species have been reported in the nearby Umstead State Park, which is part of the Crabtree Creek watershed.

The Crabtree Creek Recreational Demonstration Area (Umstead State Park) is a historical site listed in the National Register of Historic Places. Precautionary measures will be taken to minimize harm to historic property to the extent practicable during remedial actions conducted in this area and in the vicinity. Consultation with federal and state historic and archeological agencies will be necessary before initiating any activities in the vicinity of this area.

7. **Costs** include estimated capital and annual operations and maintenance (O&M) costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. A discount rate of 4 % was assumed for O&M cost.

There are no capital costs associated with Alternative 1. However, 5-year reviews will be conducted, as required by CERCLA. For costing purposes, it is assumed that 5-year reviews would be conducted for 30 years.

For Alternative 2, in addition to the 5-year review, yearly operation and maintenance costs for community outreach and educational programs are included for 30 years. The estimated cost of implementing new advisories and signs and maintaining existing or new advisories and signs has also been included. For Alternative 3, all the costs in Alternative 2 plus yearly MNR monitoring costs are included for 30 years.

Alternative 4 includes the same costs associated with Alternative 3 plus the capital costs associated with excavation and off-site disposal of sediment from Reaches B, C, D, and lower Brier Creek (because remedial actions would last for less than 6 months, there are no recurring costs associated with this alternative). Capital costs of remediation include pre-remediation sampling, mobilization/demobilization, construction of access roads, temporary staging areas, excavation, off-site transport and disposal, and site restoration.

For Alternative 5, in addition to the costs associated with Alternative 4, dredging and off-site disposal of sediments in Brier Creek Reservoir and Lake Crabtree are included. There are additional components related to dredging operations, for example, dewatering and effluent treatment.

For Alternatives 4 and 5, the MNR monitoring costs were included for only 15 years, because it is expected that the clean up levels would be met in less than 15 years.

The estimated present-worth costs for the remedial alternatives are summarized below:

Alternative 1: \$ 332,000
Alternative 2: \$ 476,000
Alternative 3: \$ 2,247,000
Alternative 4: \$ 4,989,000
Alternative 5: \$ 540,982,000

Alternative 5 would be extremely expensive, considering the large volume of sediments to be removed. According to modeling results, the time difference in achieving the clean up levels associated with fish consumption in Alternative 4 and 5 is only a few years. But due to the complexity of Alternative 5, it is estimated that planning, design, and implementation of this alternative would require a considerably greater amount of time than Alternative 4. Therefore, removing a larger amount of sediments does not necessarily correspond to a shorter amount of time to achieve clean up goals. Based on the foregoing, it would be far more cost-effective to consider Alternative 4 over Alternative 5.

The detailed costs estimates are presented in the OU1 Feasibility Study report.

8. State/Support Agency Acceptance considers whether the State agrees with the EPA's analyses and recommendations, as described in the RI/FS and Proposed Plan.

The Superfund Division of NC DENR (North Carolina Department of Environment and Natural Resources) reviewed all site-related documents and provided EPA with comments. NC DENR reviewed the Proposed Plan Fact Sheet, attended the Proposed Plan public meeting that was held in Raleigh on August 14, 2007, and reviewed a draft version of this ROD. The State concurs with the Selected Remedy. A copy of the concurrence letter is included in Appendix C.

9. Community Acceptance

The RI/FS report and Proposed Plan for the Ward Transformer Superfund Site were made available to the public in August 2007. They can be found in the Administrative Record file and the information repository maintained in the EPA Docket Room at EPA Region 4 in Atlanta, Georgia, and at the North Regional Public Library in Raleigh, North Carolina. The notice of availability of these two documents was published in the Durham Herald on August 6, 2007, and the Raleigh News and Observer on August 8, 2007. A public comment period was held from August 6, 2007, to September 4, 2007. An extension to the public comment period was requested. As a result, the comment period was extended to October 4, 2007. In addition, a public meeting was held on August 14, 2007, to present the proposed plan to a broader community audience than those that had already been involved at the site. At this meeting, representatives from the EPA and NC DENR answered questions about the Site and the remedial

alternatives. EPA's response to the comments received during this period is included in the Responsiveness Summary.

12.0 PRINCIPAL THREAT WASTE

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP §300.430(a)(1)(iii)(A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants or contaminants that act as a reservoir for migration of contamination to ground water, surface water, or air, or acts as source for direct exposure. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur. While PCBs are considered to be toxic, the main source material or principal threat waste (contaminated soil at the Ward Transformer facility) is being addressed under a time-critical removal using excavation and on-site thermal desorption treatment. Principal threat wastes are not present in this OU and therefore are not addressed by this action.

13.0 SELECTED REMEDY

13.1 Remedy Description

The Selected Remedy is a modified Alternative 4. Alternative 4 was modified as described in Section 15 of this ROD. The Selected Remedy includes the following components:

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Implement educational and community outreach programs.
- Conduct pre-excavation sampling of sediment and floodplain soil.
- Conduct a pre-excavation endangered mussel evaluation study.
- Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.
- Restore site and stream to pre-remediation conditions.
- Implement Monitor Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.
- Conduct periodic monitoring of sediment and aquatic biota.
- Implement Institutional Controls.
- Conduct Five-year reviews.

A description of each component is provided below:

- ***Continue or enhance existing fish consumption advisories and signs.***

Fish consumption advisories and signs would continue to be in place until PCB concentrations in fish are below the remediation goal (0.05 mg/kg). This component of the remedy would also include the implementation and posting of additional fish consumption advisories and signs, or any modifications to the existing ones, as needed. The continuance or enhancement of fish advisories and signs would help reduce the potential risks to humans through fish consumption.

- ***Implement educational and community outreach programs.***

Educational and community outreach programs would be developed and implemented to inform the public of the fish consumption advisories. These activities would include conducting meetings, interviews, surveys, etc.; and distribution of pamphlets or any other information material, etc. These activities should be focused on groups such as sports fishermen and local communities that commonly rely on fish consumption for part of their diets.

As part of the remedial design, an implementation plan to comply with this component of the remedy would be developed. Coordination between the appropriate stakeholders would be necessary to develop and implement this plan. The plan would define the goals, roles, duties and responsibilities of the parties involved and the means used to achieve or enforce the intended goals. Educational and community outreach programs would continue until remediation goals are achieved.

- ***Conduct pre-excavation sampling of sediment and floodplain soil.***

A pre-excavation floodplain soil and sediment sampling program would be developed and implemented. The PCB concentrations of sediment/soil samples collected at specific locations in prior years may not represent the PCB concentrations at the time when remediation commences due to the dynamic nature of stream sediments/soil and due to naturally occurring processes. In addition, floodplain soil and sediment samples would be required to accurately delineate the extent of PCB contamination prior to the commencement of remedial actions. Floodplain soil and sediment sampling for PCBs may be conducted along transects (three locations per transect) at 50-foot intervals along the length of Reaches B, C, and D, and at 100-foot intervals along the lower Brier Creek. Based on the results of this sampling program, excavation areas would be defined.

- ***Conduct a pre-excavation endangered mussel evaluation study.***

A mussel survey and evaluation study would be conducted to determine if threatened/endangered mussel species are present in the areas selected for remediation.

- ***Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.***

Based on the results of the pre-excavation sampling program, sediments and flood plain soil from Reaches B, C, D, and lower Brier Creek will be excavated to levels below 1 mg/kg. Excavated sediments/soil will be transported and properly disposed of off-site. An excavation verification plan will be developed as part of the Remedial Design. Verification samples will be collected to ensure the 1 mg/kg remediation goal is achieved.

Prior to the excavation of stream sediments, sections of the stream flow could be blocked off and water could be bypassed through pipes running parallel to the blocked stream section. Major activities associated with this alternative would include stream diversion, construction of access roads to transport equipment and haul excavated material, excavation of sediments/soil, construction of temporary staging areas, transport excavated sediment/soil off-site to be disposed properly, and conduct verification sampling.

Precautions would be taken to minimize any impact on identified local endangered and threatened species. Also, activities would be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks, construction, and erosion and sediment control.

- ***Restore site and stream to pre-remediation conditions.***

All disturbed areas would be restored to pre-remediation conditions. This includes replenishment of areas where sediment and soil was removed, restoration of areas that were disturbed during remediation activities, including temporary staging areas, and areas cleared for access roads.

- ***Implement Monitor Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.***

Monitor Natural Recovery, which allows natural processes to achieve remediation goals would be implemented in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek. MNR is a sediment remedy that uses ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment, thereby reducing potential risks to human and/or ecological receptors.

Periodic monitoring of sediment would be conducted to assess PCB concentrations in sediment over time. In addition, monitoring of aquatic biota (fish sampling) would be conducted to support future decisions regarding fish consumption advisories. An MNR sampling program would be developed and implemented in accordance with EPA sediment guidance for evaluating Natural Recovery remedies to document lines of evidence of natural recovery in sediment. MNR would be conducted until remediation goals are achieved.

- ***Conduct periodic monitoring of sediment and aquatic biota.***

Periodic monitoring of sediment and aquatic biota (fish sampling) would be conducted. A monitoring program would be developed to assess the remedy and support future decisions regarding fish consumption advisories and protection of ecological receptors. Periodic monitoring would be conducted until remediation goals are achieved.

- ***Implement Institutional Controls.***

Institutional Controls would be implemented to ensure the integrity and protectiveness of the remedy. Continue or enhance existing fish consumption advisories and signs was identified as an institutional control measure appropriate for the Site. Other institutional control measures might be identified and implemented.

- ***Conduct Five-year reviews.***

Five-year reviews would be conducted to evaluate the implementation and performance of the Selected Remedy, and in order to determine if the remedy continues to be protective of human health and the environment. Five year reviews would be conducted as required under CERCLA.

13.2 Summary of the Rationale for the Selected Remedy

The Selected Remedy is protective of the human health and the environment because removes PCB contaminated sediment with concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek, therefore reducing potential exposure to contaminated sediment. In addition the Selected Remedy would remove any flood plain soil with PCB concentrations above 1 mg/kg along Reaches B, C, D, and lower Brier Creek, which would reduce potential exposure to contaminated soil, and would eliminate another potential source of PCB.

The Selected Remedy uses Monitor Natural Recovery (MNR) which would allow natural processes to achieve remediation goals in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek. The remedy would reduce the bioavailability of contaminants in sediment, thereby reducing potential risks to ecological receptors. MNR is especially effective at sites such as this one where the main source of contamination would be removed and current levels of PCBs in sediment are low enough. The on-going time-critical removal action would accomplish source removal; and remediation of sediment and flood plain soil along Reaches B, C, D, and lower Brier Creek would reduce the amount of PCBs moving downstream. These actions would support MNR, and eventually reduce sediment PCB concentrations within the biologically active zone in Brier Creek Reservoir and Lake Crabtree to levels which will support the reduction of PCB concentrations in fish and other aquatic biota.

Institutional controls, like the continuance or enhancement of fish advisories and signs, and the implementation of educational and community outreach programs, would help reduce the potential risks to humans through fish consumption.

The estimated time required to achieve the remediation goal in fish tissue (0.05 mg/kg) at the Brier Creek Reservoir would be approximately 14 years; and in Lake Crabtree would be approximately 9 years.

The Selected Remedy would comply with all Applicable or Relevant and Appropriate Requirements (ARARs).

13.3 Summary of the Estimated Remedy Costs

A summary of the estimated costs of the Selected Remedy is:

Capital Costs:	\$ 4,072,000
O & M Costs (Present Worth):	\$ 1,258,000
Contingency Costs:	\$ 800,000
Total Present Worth Costs:	\$ 6,130,000

A more detailed breakdown of the estimated costs is presented in Table 16.

13.4 Expected Outcomes of the Selected Remedy

The removal of sediments and floodplain soil with PCB concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek will eliminate the risks to humans and ecological receptors through direct exposure to soil/sediments and these areas should be available for unrestricted use.

Risks associated with fish consumption would not be eliminated immediately after the remedial actions, but modeling results indicate that once the removal action is completed at the facility and the sediments and floodplain soil with PCB concentrations above 1 mg/kg are removed from the streams (Reaches B, C, D, and lower Brier Creek), the PCB concentrations in the sediments that migrate downstream to Brier Creek Reservoir, Lake Crabtree, and lower Crabtree Creek would be low enough to support natural recovery of the sediments and reduce even more the bioavailability of PCBs to fish. Once PCB concentrations in fish tissue achieve levels below the fish tissue cleanup goal of 0.05mg/kg, all OU1 areas would be available for unrestricted use and within acceptable risk levels for unlimited exposure for human and ecological receptors.

Table 16
SELECTED REMEDY COST ESTIMATE

Task	Quantity	Units	Unit Cost	Total Cost
A. Capital Costs				
(1) Pre-remediation Sampling				
Sediment, soil, biota & surface water sampling (labor & travel)	600	HR	\$60	\$36,000
Sampling equipment, containers, shipping, etc.	1	LS	\$3,000	\$3,000
Sampling and Analysis				
PCB (sediment)	800	EA	\$100	\$80,000
PCB (soil)	800	EA	\$100	\$80,000
Data Validation	1,600	EA	\$20	\$32,000
Report Preparation	640	HR	\$100	\$64,000
Report production (word processing, graphics, printing)	1	LS	\$5,000	\$5,000
Subtotal				\$300,000
(2) Plans				
Health and Safety Plan	1	LS	\$3,800	\$3,800
QA/QC Plan	1	LS	\$7,400	\$7,400
Coordination and meetings	1	LS	\$9,600	\$9,600
Final report	1	LS	\$12,250	\$12,250
Permits	1	LS	\$27,500	\$27,500
Subtotal				\$60,550
(3) Mobilization/demobilization				
Mobilization/demobilization	1	LS	\$5,500	\$5,500
Survey and stake-out	1	LS	\$13,200	\$13,200
Facilities setup and Temporary Stockpile Area	1	LS	\$25,000	\$25,000
Subtotal				\$43,700
(4) Reach B Remediation				
Stabilized construction entrances	1	LS	\$3,800	\$3,800
Gravel haul road	1,740	LF	\$35	\$60,900
Stream diversion	1	LS	\$7,400	\$7,400
Excavation	1,966	CY	\$22	\$43,252
Backfill	1,966	CY	\$35	\$68,810
Site Restoration	0	AC	\$20,000	\$8,000
Transport and disposal	2,949	TN	\$90	\$265,410
Subtotal				\$457,572
(5) Reach C Remediation				
Stabilized construction entrances	1	LS	\$5,000	\$5,000
Gravel haul road	2,300	LF	\$35	\$80,500
Stream diversion	1	LS	\$9,000	\$9,000
Excavation	2,021	CY	\$22	\$44,462
Backfill	2,021	CY	\$35	\$70,735
Site Restoration	1	AC	\$20,000	\$10,600
Transport and disposal	3,032	TN	\$90	\$272,835
Subtotal				\$493,132

Table 16 (con't)

Task	Quantity	Units	Unit Cost	Total Cost
(6) Reach D Remediation				
Stabilized construction entrances	1	LS	\$5,000	\$5,000
Gravel haul road	4,400	LF	\$35	\$154,000
Stream diversion	1	LS	\$9,500	\$9,500
Excavation	6,076	CY	\$25	\$151,900
Backfill	6,076	CY	\$35	\$212,660
Site Restoration	1.01	AC	\$20,000	\$20,200
Transport and disposal	9.114	TN	\$90	\$820,260
Subtotal				\$1,373,520
(7) Lower Brier Creek Remediation				
Stabilized construction entrances	1	LS	\$5,000	\$5,000
Gravel haul road	9,200	LF	\$35	\$322,000
Stream diversion	1	LS	\$10,600	\$10,600
Excavation	3,046	CY	\$25	\$76,150
Backfill	3,046	CY	\$35	\$106,610
Site Restoration	2.11	AC	\$20,000	\$42,200
Transport and disposal	4,569	TN	\$90	\$411,210
Subtotal				\$973,770
Total				<u>\$3,702,244</u>

B. O&M Costs

(1) Fish advisories (annually for 15 years)

Implementation of Fish Advisories (already in place)	NA	NA	\$0	\$0
Yearly partial replacement of fish advisory sign posts	10	EA	\$200	\$2,000
Subtotal				\$2,000

(2) Educational and community programs (yearly)

Pamphlets, newspaper advertisements, public meetings, community outreach programs, etc.	1	LS	\$5,000	\$5,000
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(3) 5-Year Review (cost per event)

Note: Separate cost for 5-year sampling has not been included. Sampling results from MNR will be used instead.

Report Preparation	160	HR	\$100	\$16,000
Report production (word processing, graphics, printing)	1	LS	\$5,000	\$5,000
Subtotal				\$21,000

(4) Periodic Sampling Yearly (MNR; Sediment and Aquatic Biota)

Sediment, biota & surface water sampling (labor & travel)	300	HR	\$60	\$18,000
Sampling equipment, containers, shipping, etc.	1	LS	\$5,000	\$5,000
Sampling and Analysis				
PCB and TOC (sediment) - normal detection limit*	30	EA	\$100	\$3,000
PCB and TOC (sediment) - low detection limit**	51	EA	\$200	\$10,200
PCB and Lipid (biota)	122	EA	\$200	\$24,400
PCB (surface water)	10	EA	\$200	\$2,000
Data Validation	213	EA	\$20	\$4,260
Report Preparation	200	HR	\$100	\$20,000
Report production (word processing, graphics, printing)	1	LS	\$3,000	\$3,000
Subtotal (per event)				\$89,860

* Reaches B. C. and D. and Lower Brier Creek

** Brier Creek Reservoir and Lake Crabtree

Table 16 (con't)

SELECTED REMEDY COST SUMMARY

Tasks	Item Cost	Total Cost
<u>A. Capital Costs</u>		
(1) Pre-remediation Sampling	\$300,000	
(2) Plans	\$60,550	
(3) Mobilization/demobilization	\$43,700	
(4) Reach B Remediation	\$457,572	
(5) Reach C Remediation	\$493,132	
(6) Reach D Remediation	\$1,373,520	
(7) Lower Brier Creek Remediation	\$973,770	
		\$3,702,244
<u>B. O&M Costs</u>		
Note: A discount rate of 4% was assumed for O&M.		
(1) Fish advisories (yearly, for 15 years)	\$22,237	
(2) Educational and community programs (yearly, for 15 years)	\$55,592	
(3) 5-Year Review (conducted in years 5, 10, 15, 20, 25, and 30)	\$67,044	
(4) Periodic Sampling (MNR; Sediment and Aquatic Biota, yearly for 15 years)	\$999,098	
	Total O&M Cost	\$1,143,971
	Subtotal of Capital and O&M Costs	\$4,846,215
Engineering and Administrative Costs (10%)		\$484,622
	Subtotal	\$5,330,837
Contingency (15%)		\$799,625
TOTAL PRESENT WORTH COST OF SELECTED REMEDY		\$6,130,462

14.0 STATUTORY DETERMINATIONS

The Selected Remedy satisfies the requirement of Section 121 of CERCLA, 42 U.S.C. § 9621, and to the extent practicable, the NCP § 300.430, 40 Code of Federal Regulations (CFR) § 300.430.

The Selected Remedy is protective of human health and the environment, will comply with the identified ARARs of other environmental statutes, will be cost effective, and will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.

14.1 Protection of Human Health and the Environment

The remedy for this Site will adequately protect human health and the environment by eliminating, reducing, or controlling exposures to human health and environmental receptors through excavation of contaminated sediments and soil, monitored natural recovery and institutional controls. Fish consumption advisories issued by the State of North Carolina will remain in effect until contaminant concentrations in fish are below remediation goals.

14.2 Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

The remedy would be designed to comply with all ARARs under federal and state laws. Chemical-, location-, and action-specific ARARs are listed in Tables 17, 18 and 19.

14.3 Cost Effectiveness

The Selected Remedy is cost effective and represents a reasonable value for the money to be spent. In making this determination, the following definition was used: "A remedy shall be cost-effective if its costs are proportional to its overall effectiveness" (NCP §300.430(f)(1)(ii)(D)). This was accomplished by evaluating the "overall effectiveness" of those alternatives that satisfy the threshold criteria (i.e., were protective of human health and the environment and ARAR compliance). Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination: (1) Long-term effectiveness and permanence; (2) Reduction in toxicity, mobility and volume (TMV) through treatment; and, (3) Short-term effectiveness. Overall effectiveness was then compared to costs to determine cost-effectiveness. The relationship of the overall effectiveness of the Selected Remedy was determined to be proportional to its costs and hence represent a reasonable value for the money to be spent.

The estimated present worth costs for the Selected Remedy is \$6,130,462.

Table 17

Chemical-Specific ARARs

Regulation	Citation	Criterion/Standard	Applicability/ Appropriateness	Actions to be Taken to Attain ARARs
Toxic Substances Control Act (TSCA)	40 CFR 761	TSCA regulates several chemical constituents (including PCBs) at levels that represent a significant risk to human health or the environment. Specifically, PCB regulations that regulate the disposal of material (such as soil and sediment) that contain PCBs at levels >50 ppm or have resulted from a known spill of PCB liquid containing >50 ppm PCB.	Applicable. PCBs found in soils and sediments within OUI are an order of magnitude less than 50 ppm. However, additional sampling will be conducted, and PCB with levels above 50 ppm may exist. TSCA regulations are applicable to the Selected Remedy because it involves removal of PCB-contaminated sediment/soil.	Remedial actions will be conducted in accordance with applicable portions of TSCA requirements for PCBs. Sediments/soil with PCB concentrations above 1 ppm will be excavated and transported off-site in accordance with TSCA regulations.
North Carolina Health-Based Soil Remediation Goals	15A NCAC 13C.0300	The State of North Carolina has developed health-based remediation goals for the inactive sites for selected chemicals. The PCB soil remediation goal is based on the EPA policy for cleanup of PCBs at Superfund sites. The soil remediation goal for PCBs is 1 ppm.	Applicable. The Selected Remedy involves removal of PCB-contaminated sediments.	Sediments/soil with PCB concentrations above 1 ppm will be excavated and transported off-site.

Table 18

Action-Specific ARARs

Regulation	Citation	Criterion/Standard	Applicability/ Appropriateness	Actions to be Taken to Attain ARARs
TSCA Regulations for PCB Remediation Waste	40 CFR 761.61(c)	TSCA regulates the disposal of PCB remediation waste by methods including containing, transporting, destroying, degrading, or confining PCBs.	Applicable. PCBs found in soils and sediments within OUI are an order of magnitude less than 50 ppm. However, additional sampling will be conducted, and PCB with levels above 50 ppm may exist. TSCA regulations are applicable to the Selected Remedy because it involves removal of PCB-contaminated sediment/soil.	Applicable portions of the regulations will be met.
	40 CFR 761.79	Establishes decontamination standards and procedures for removing PCBs from non-porous surfaces.	Applicable.	Decontamination activities will be conducted in accordance with the specified requirements.
The Clean Air Act (CAA)	40 CFR 50	Air quality requirements are specified for sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, lead, and particulate matter.	Potentially applicable to activities that involve dust emissions (e.g., excavation, road construction).	Measures will be taken to minimize dust emissions (e.g., spraying water)
Clean Water Act	40 CFR 403	Establishes effluent standards for direct and non-direct point source discharges.	Potentially applicable if treated water from dewatered sediments is discharged to surface water.	Appropriate effluent standards will be met.
	National Pollution Discharge Elimination System (NPDES) (40 CFR 122, 125)	Establishes NPDES discharge limitations based on Best Available Technology (BAT), and Best Management Practices (BMP).	Potentially applicable if treated water from dewatered sediments is discharged to surface water.	BAT and BMP requirements will be met.

Table 18

Action-Specific ARARs

Regulation	Citation	Criterion/Standard	Applicability/ Appropriateness	Actions to be Taken to Attain ARARs
North Carolina Water Pollution Control Regulations	15A NCAC 2B 15A NCAC 2H	State version of the federal NPDES program. Establishes requirements for wastewater discharge to surface water and wastewater treatment.	Applicable to treated water from dewatered sediments is discharged to surface water.	Appropriate effluent standards will be met.
North Carolina Water and Air Resources Act	NC G.S. Ch 143, Articles 21, 21B. 15A NCAC 2L.0202	Chapter 15A Section 02L.0202 of the NCAC specifies groundwater quality standards for the protection of groundwater of the state through maximum allowable concentrations resulting from any discharge of contaminants to the land or waters. Chapter 15A Section 2D.0540 of the NCAC establishes requirements for fugitive non-process dust emissions.	Applicable to discharge of treated water to ground or surface water. Potentially applicable for alternatives that involve dust emissions (e.g., excavation, temporary road construction).	Maximum allowable concentrations will be met if water is discharged to ground or surface water. Precautionary measures will be taken to minimize dust emissions.
North Carolina Sedimentation Control Act of 1973	15A NCGS 113A, Article 4 15 NCAC 2B	Specifies requirements associated with activities that involve land disturbance activities and activities in lakes and natural water courses.	Applicable to access road construction, excavation, or dredging activities.	An erosion and sedimentation control plan will be submitted. Appropriate measures will be taken to minimize the impact on the environment as required.
North Carolina Solid Waste Management Regulations	NCGS 130A, Article 9	Establishes requirements for the management of non-hazardous solid waste	Applicable to transport and disposal of excavation or dredging materials	

Table 19
Location-Specific ARARs

Regulation	Citation	Requirements	Applicability/Appropriateness	Actions to be Taken to Attain ARARs
Endangered Species Act	16 USC 1531 et seq. 40 CFR 6.302(h)	Under this act, federal agencies are prohibited from jeopardizing threatened or endangered species or adversely modifying habitats essential to their survival.	Applicable. Bald eagle has been recorded within 1 to 2 miles from the site. Endangered bald eagles are nesting at Lake Crabtree and foraging at Lake Crabtree and Brier Creek Reservoir. The state endangered Atlantic pigtoe mussel and the state threatened squawfoot mussel have been reported in the nearby Umstead State Park, which is part of the same Crabtree Creek watershed. These species could potentially be present in the unnamed tributary to Little Brier Creek. Potentially applicable.	Remediation activities will be conducted in accordance with the Endangered Species Act requirements.
Fish and Wildlife Coordination Act	16 USC 661 et seq. 40 CFR 6.302(g)	Requires federal agencies involved in actions that will result in the control or structural modification of any natural stream or body of water for any purpose, to take action to protect the fish and wildlife resources which may be affected by the action.	Potentially applicable.	Remediation activities will be in consultation with appropriate wildlife agencies.

Table 19
Location-Specific ARARs

Regulation	Citation	Requirements	Applicability/Appropriateness	Actions to be Taken to Attain ARARs
Protection of Wetlands	Executive Order 11990 40 CFR 6.302(a)	Requires federal agencies conducting certain activities to avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practicable alternative exists.	Potentially applicable. Portions of the Ward Transformer Site (OUI) are classified as wetlands.	Measures will be taken to minimize and mitigate any adverse impacts. Erosion and sedimentation control measures will be adopted during remediation activities.
Floodplain Management	Executive Order 11988 40 CFR 6.302(b)	Requires federal agencies to evaluate the potential effects of actions they may take in a floodplain to avoid, to the extent possible, adverse effects associated with direct and indirect development of a floodplain.	Potentially applicable. Parts of the Ward Transformer Site (OUI) consist of floodplains.	Measures will be taken to minimize adverse effects associated with direct and indirect development of a floodplain.
Preservation of Historical and Archaeological Data Act and National Historic Preservation Act	16 USC 469 et seq. 36 CFR Part 65 16 USC 470 et seq. 36 CFR Part 800	Recovery and preservation of historical and archaeological data. Also requires measures to minimize harm to historic resources.	Crabtree Creek Recreational Demonstration Area (also known as Umstead State Park) is a historical site listed in the National Register of Historic Places. Potentially applicable to activities at or in the vicinity of the historic location.	Precautionary measures will be taken to minimize harm to the historic property to the extent practicable.

Table 19
Location-Specific ARARs

Regulation	Citation	Requirements	Applicability/Appropriateness	Actions to be Taken to Attain ARARs
North Carolina Requirements During Minor Construction Activities	15A NCAC 01C .0408	This rule sets out the general and specific minimum criteria for construction activities. Construction and land-disturbing activities fall under both the general minimum criteria and any specific minimum criteria applicable to the project.	Potentially applicable.	Appropriate measures will be taken as required to minimize the impact from land-disturbing activities and comply with the requirement.
North Carolina Sedimentation/Erosion Control Regulations	15A NCAC 04B .0105-.0109	This rule establishes the sedimentation and erosion control pertaining to: <ul style="list-style-type: none"> ▪ Protection of property (04B.0105). ▪ Basic control objectives (04B.0106). ▪ Mandatory standards for land-disturbing activity (04B.0107). ▪ Design and performance standards (04B.0108). ▪ Stormwater outlet protection (04B.0109). 	Potentially applicable.	Appropriate erosion and sedimentation control measures will be taken during excavation and removal activities as required.
North Carolina Management of Isolated Wetlands and Waters	15A NCAC 02H.1301	This rule pertains to the disposition of dredged or fill material in isolated wetlands or waters of the State	Potentially applicable	

14.4 Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable

EPA and NC DENR have determined that the Selected Remedy represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a cost-effective manner, given the specific conditions at the Site. Of those alternatives that are protective of human health and the environment and comply with ARARs, EPA and NC DENR have determined that the Selected Remedy provides the best balance of trade-offs in terms of long-term effectiveness and permanence, reduction of toxicity, mobility, or volume, short-term effectiveness, implementability, and cost, while also considering State and community acceptance.

14.5 Preference for Treatment as a Principal

While the Selected Remedy for OU1 does not meet this criterion, the low PCB levels in the sediment and floodplain soil would require excavation but may not require treatment prior to disposal. In addition, this OU does not address the main source material. The main source material or principal threat waste (PCB contaminated soil at the Ward Transformer Facility) at the Site is being addressed through a time critical removal action using thermal desorption. For this OU the combination of excavation and off site disposal, together with natural processes should effectively achieve remediation goals without the need for treatment.

14.6 Five Year Review Requirements

NCP §300.430(f)(4)(ii) requires a five-year review if a remedial action results in hazardous substances, pollutants, or contaminants remaining onsite above levels that allow for unlimited use and unrestricted exposure. The remedy for OU 1 at the Ward Transformer Superfund Site will not result in contaminants remaining on site above levels that allow for unlimited use and unrestricted exposure. However, the remedy will take longer than five years to achieve unlimited use and unrestricted exposure. As such, as a matter of policy EPA will conduct a Five-year review until levels that allow for unlimited use and unrestricted exposure are achieved. The first Five-Year Report should be completed five years from the date the Preliminary Close-Out Report (PCOR) is issued.

15.0 DOCUMENTATION OF SIGNIFICANT CHANGES

Section 117(b) of CERCLA requires an explanation of any significant changes from the preferred alternative presented to the public. The Proposed Plan Fact Sheet was released to the public in August 2007. Alternative 4 was presented to the public as EPA preferred alternative. The components of Alternative 4, as presented to the public, are described in Section 10 of this ROD. Based on the comments received during the comment period, the following changes were made

to Alternative 4. The Selected Remedy as described in Section 13 of this ROD includes these changes.

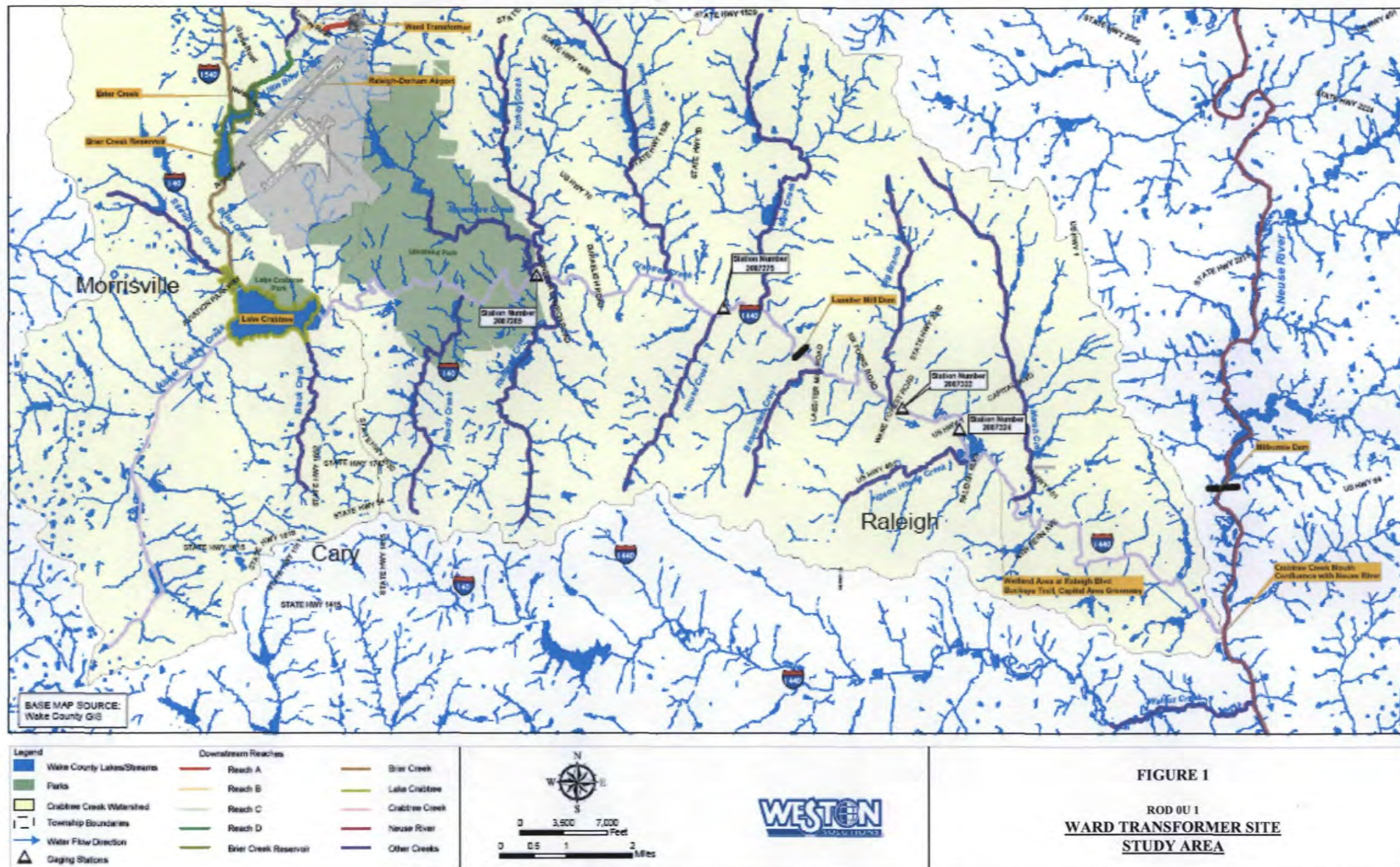
1. During the public comment period new information indicated the need for additional actions to address concerns regarding floodplain soil along Reaches B, C, D and Lower Brier Creek. These additional actions would address any contaminated flood plain soil with PCB concentrations above 1 mg/kg that may be present at these areas; and if present and not remove, exposure to this material would present unacceptable risk to humans and ecological receptors. In addition, contaminated soil from flood plain areas would be a source of PCB. After evaluating public comments EPA decided to modify Alternative 4 to include:

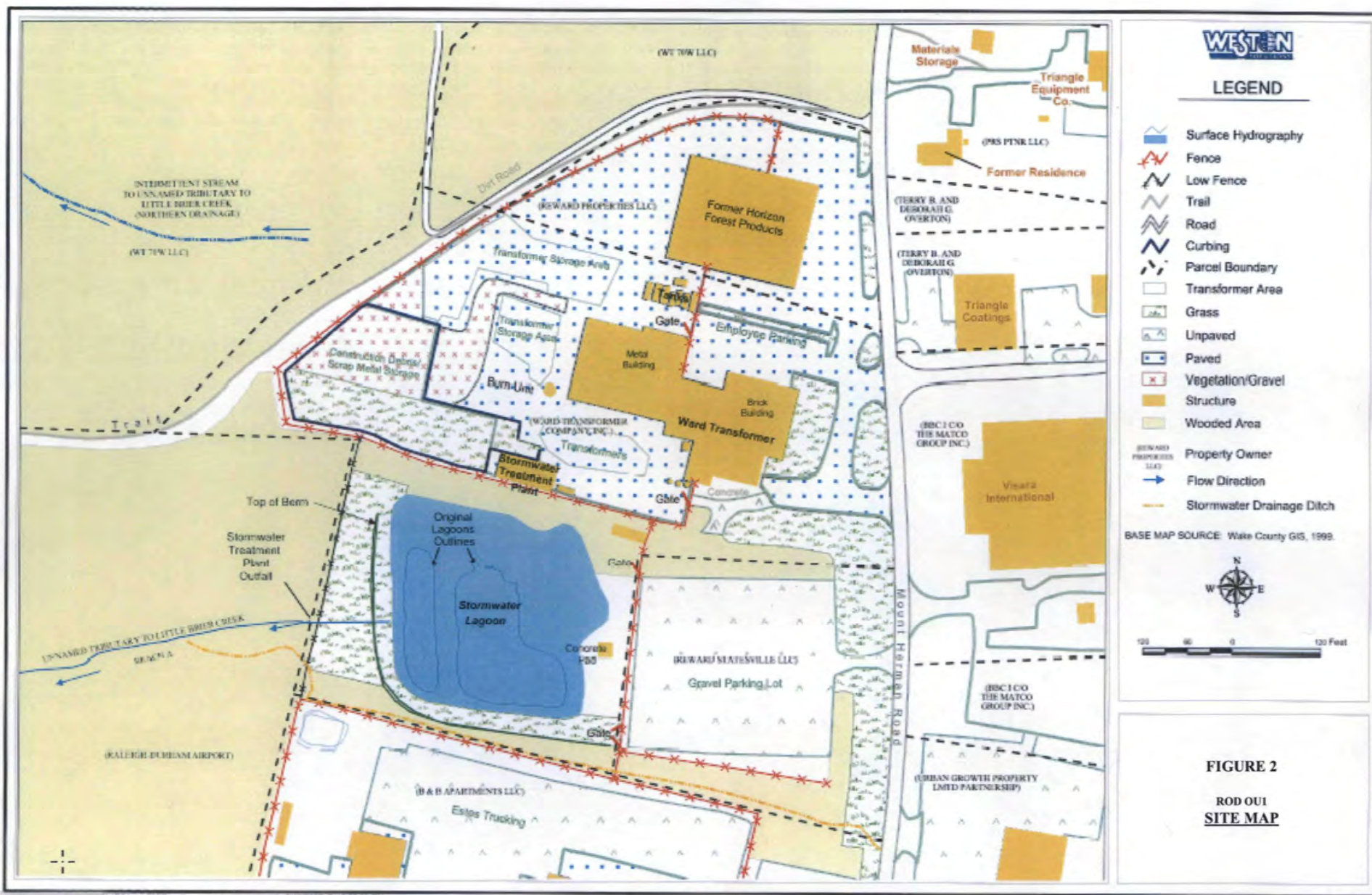
- Additional sampling of floodplain soil along Reaches B, C, D, and Lower Brier Creek as part of the pre-excavation sediment sampling program from Reaches B, C, D, and Lower Brier Creek, already included in Alternative 4.
- Excavation and disposal of floodplain soil along Reaches B, C, D, and Lower Brier Creek, to levels below the 1 mg/kg remediation goal, as part of the sediment excavation/disposal from Reaches B, C, D, and Lower Brier Creek, to levels below the 1 mg/kg remediation goal already included in Alternative 4.

2. The cost estimate for Alternative 4 was revised to include:

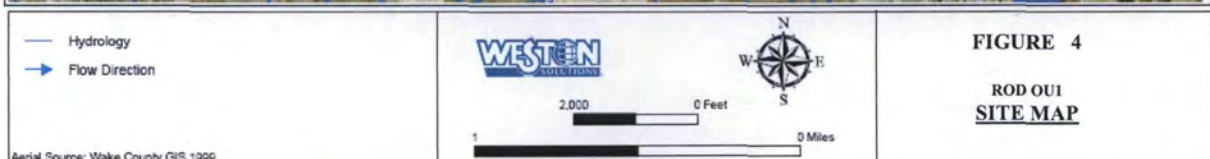
- Cost for floodplain pre-excavation sampling, excavation, and disposal.
- Cost for excavation-verification sampling, inadvertently not included in the original estimate.

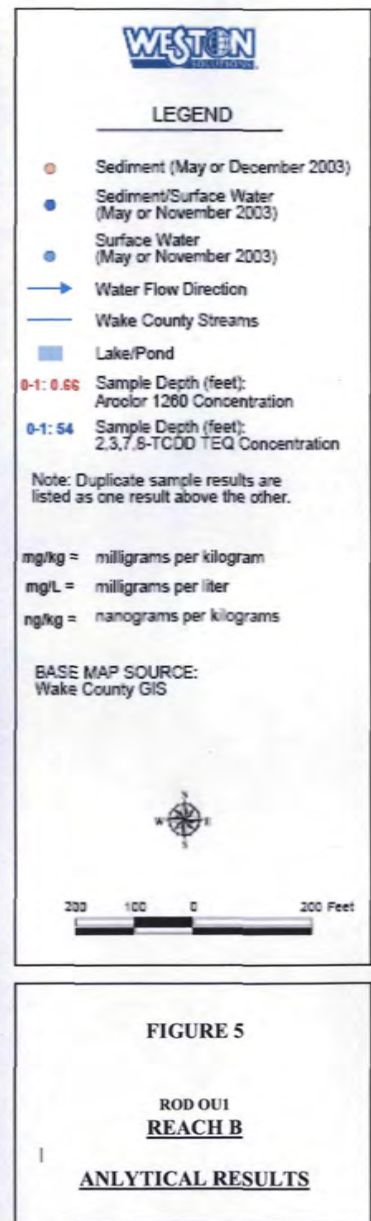
APPENDIX A













WESTON
CONSULTING

LEGEND

- Sediment (May or November 2003)
 - Sediment/Surface Water (May or November 2003)
 - 0-1: 0.65 Sample Depth (feet): Aroclor 1260 Concentration
 - 0-1: 54 Sample Depth (feet): 2,3,7,8-TCDD TEQ Concentration
 - Water Flow Direction
 - Wake County Streams
- Note: Duplicate sample results are listed as one result above the other.
- mg/kg = milligrams per kilogram
 mg/L = milligrams per liter
 ng/kg = nanograms per kilograms
 U = PCBs were analyzed for, but not detected. The associated numerical value is the sample quantitation limit

BASE MAP SOURCE: Wake County GIS

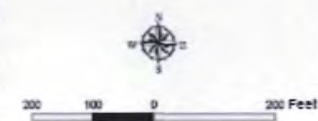
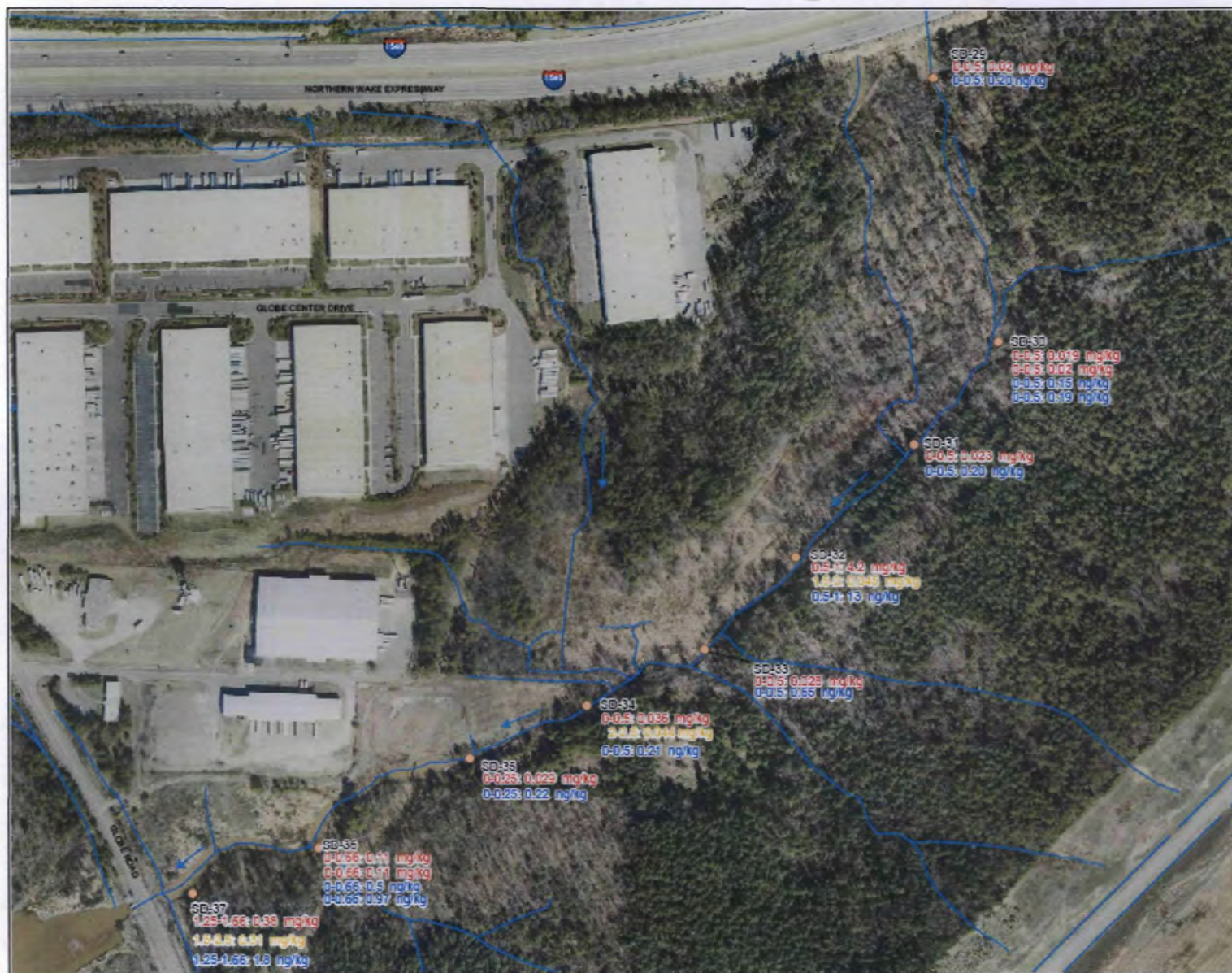


FIGURE 6

ROD OUI
REACH C

ANLYTICAL RESULTS



WESTON
CONSTRUCTION

LEGEND

- Sediment
- Water Flow Direction
- Wake County Streams
- Sample Depth (feet):
- 0-1: 0.55
Aroclor 1260 Concentration
(November 2003)
- 0-1: 0.55
Sample Depth (feet):
Aroclor 1260 Concentration
(February/March 2006)
- 0-1: 54
Sample Depth (feet):
2,3,7,8-TCDD TEQ Concentration
(November 2003)

Note: Duplicate sample results are listed as one result above the other.

mg/kg = milligrams per kilogram

ng/kg = nanograms per kilogram

BASE MAP SOURCE:
Wake County GIS



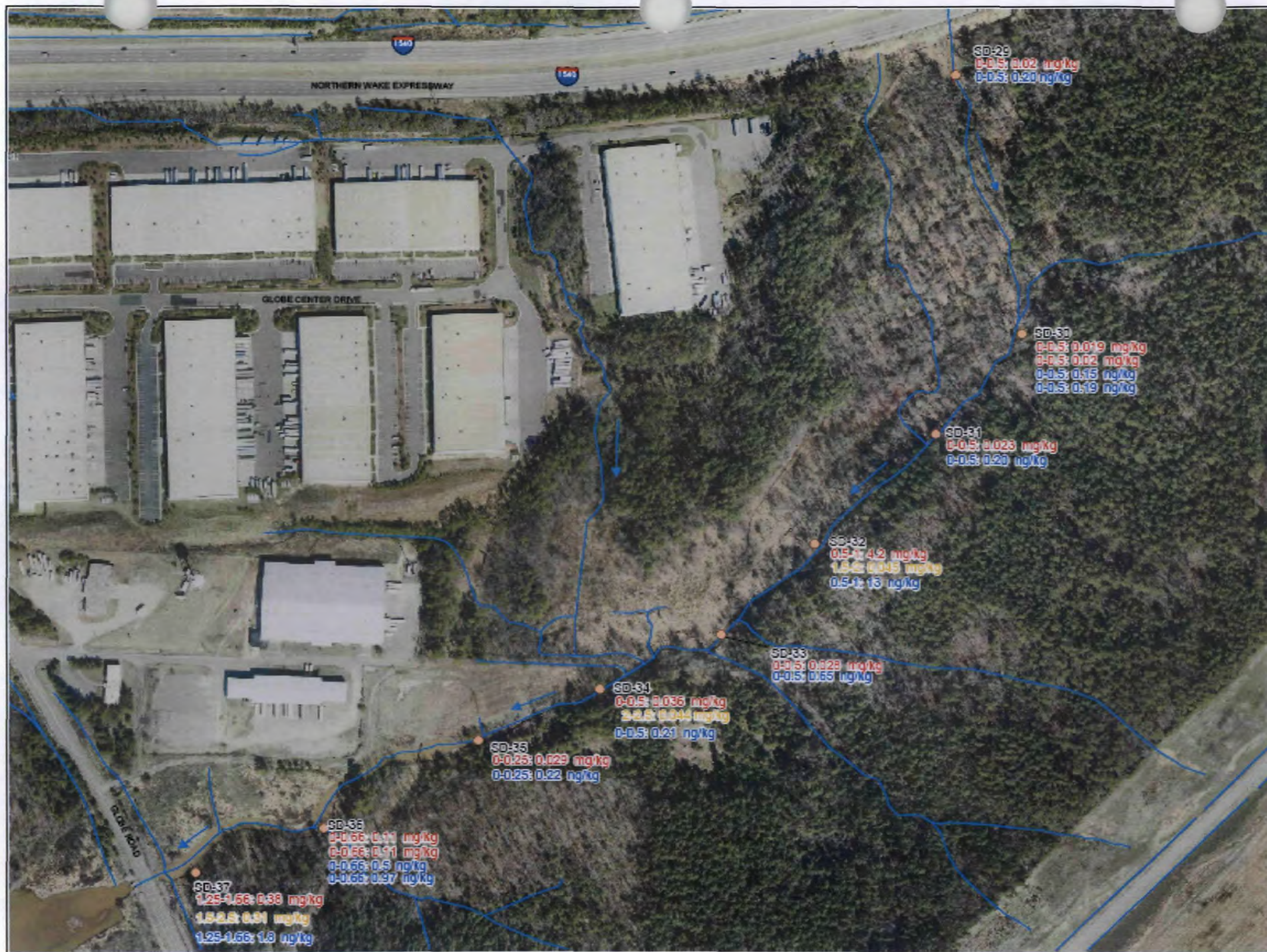
300 150 0 300 Feet

FIGURE 7

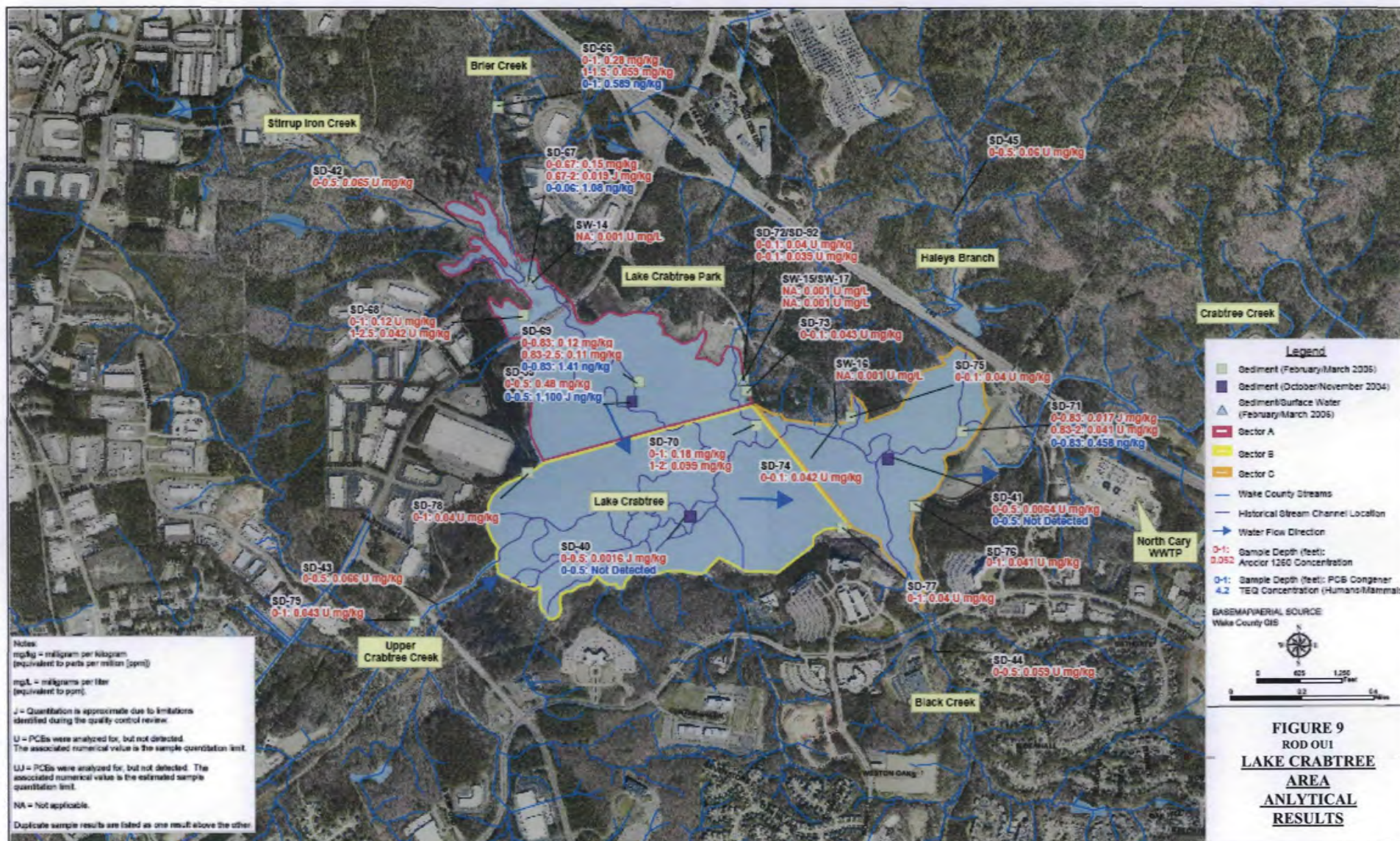
ROD OUI

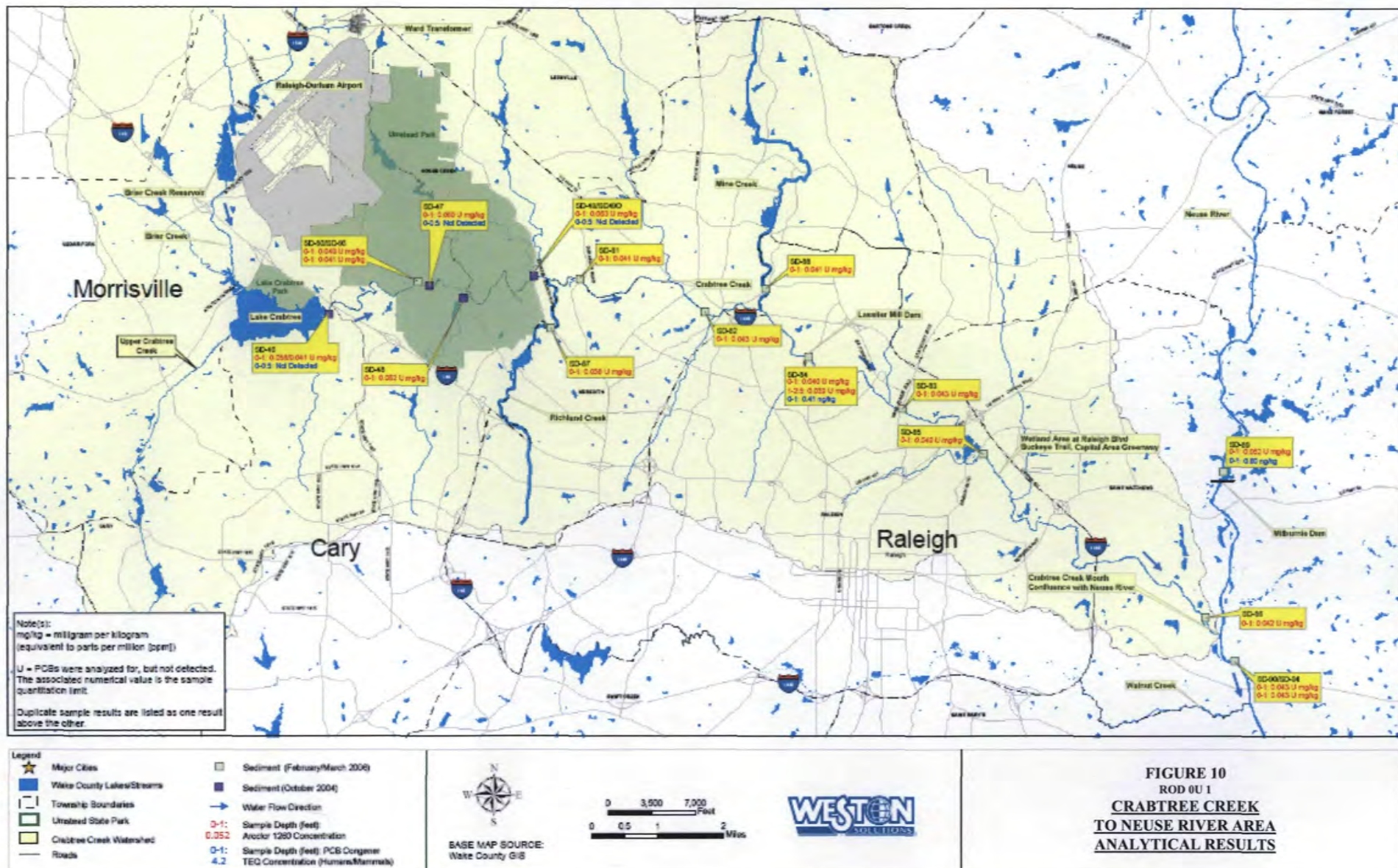
REACH D

ANLYTICAL RESULTS









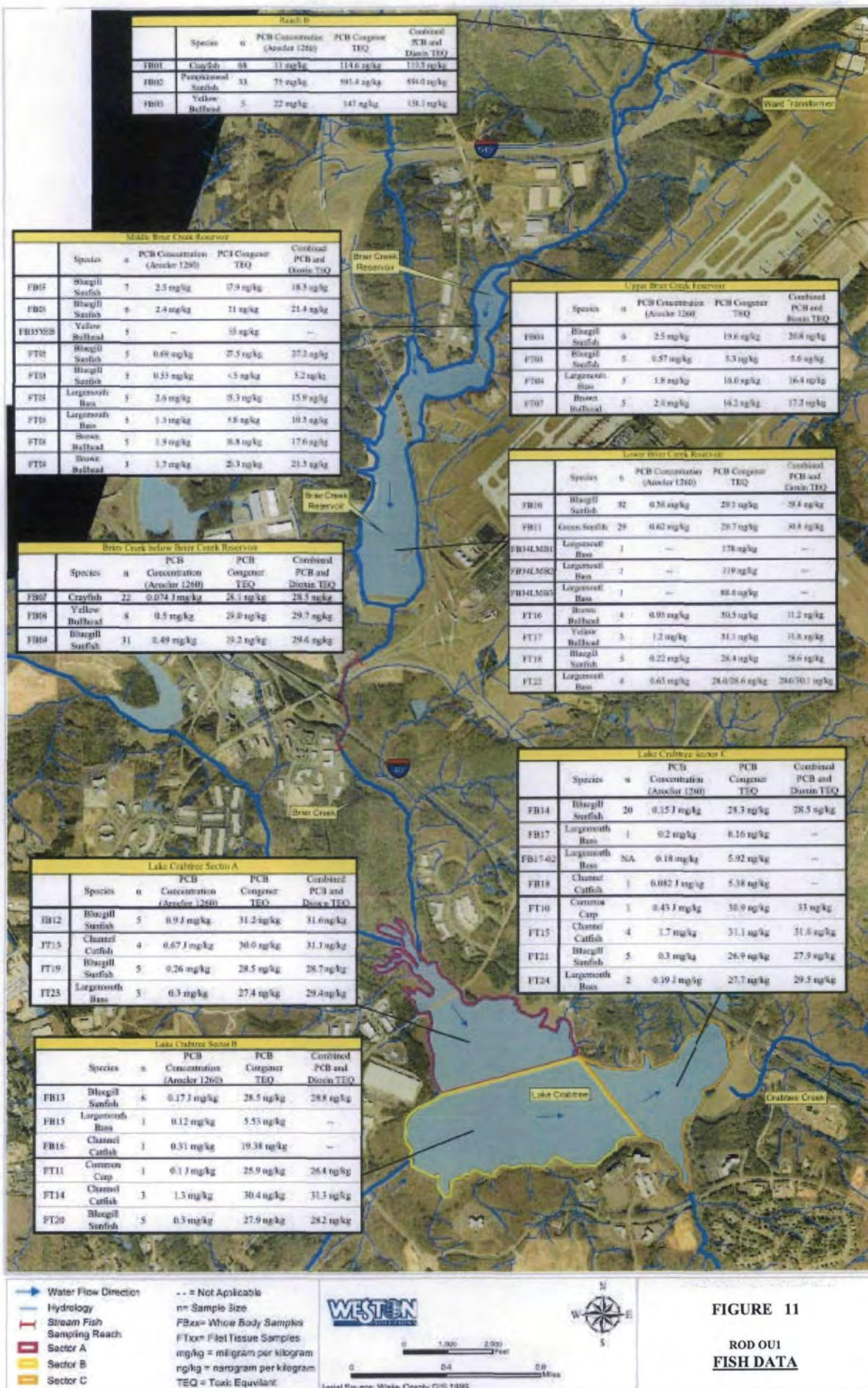


FIGURE 11

ROD OUI
FISH DATA

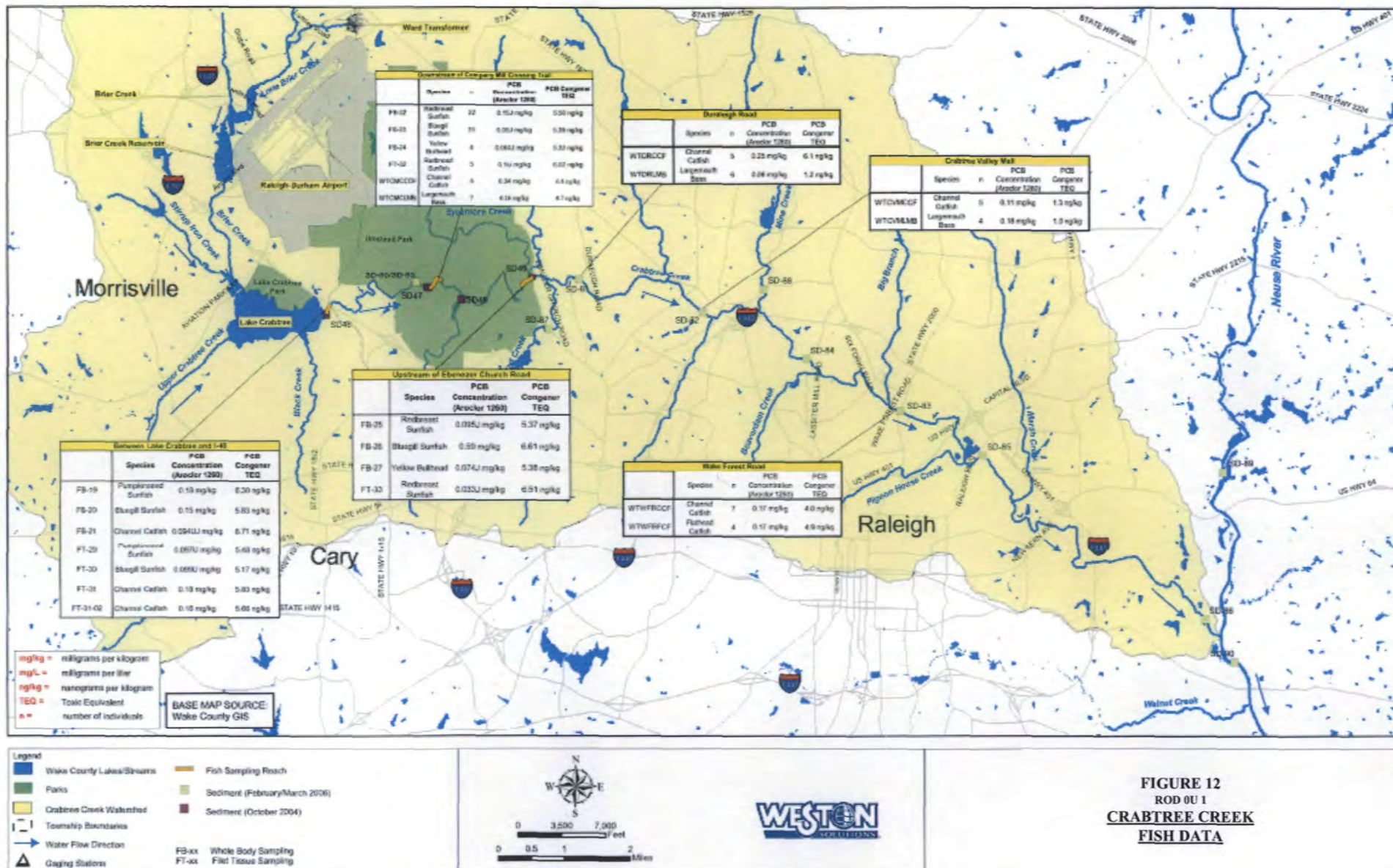


FIGURE 12
ROD 0U 1
CRABTREE CREEK
FISH DATA

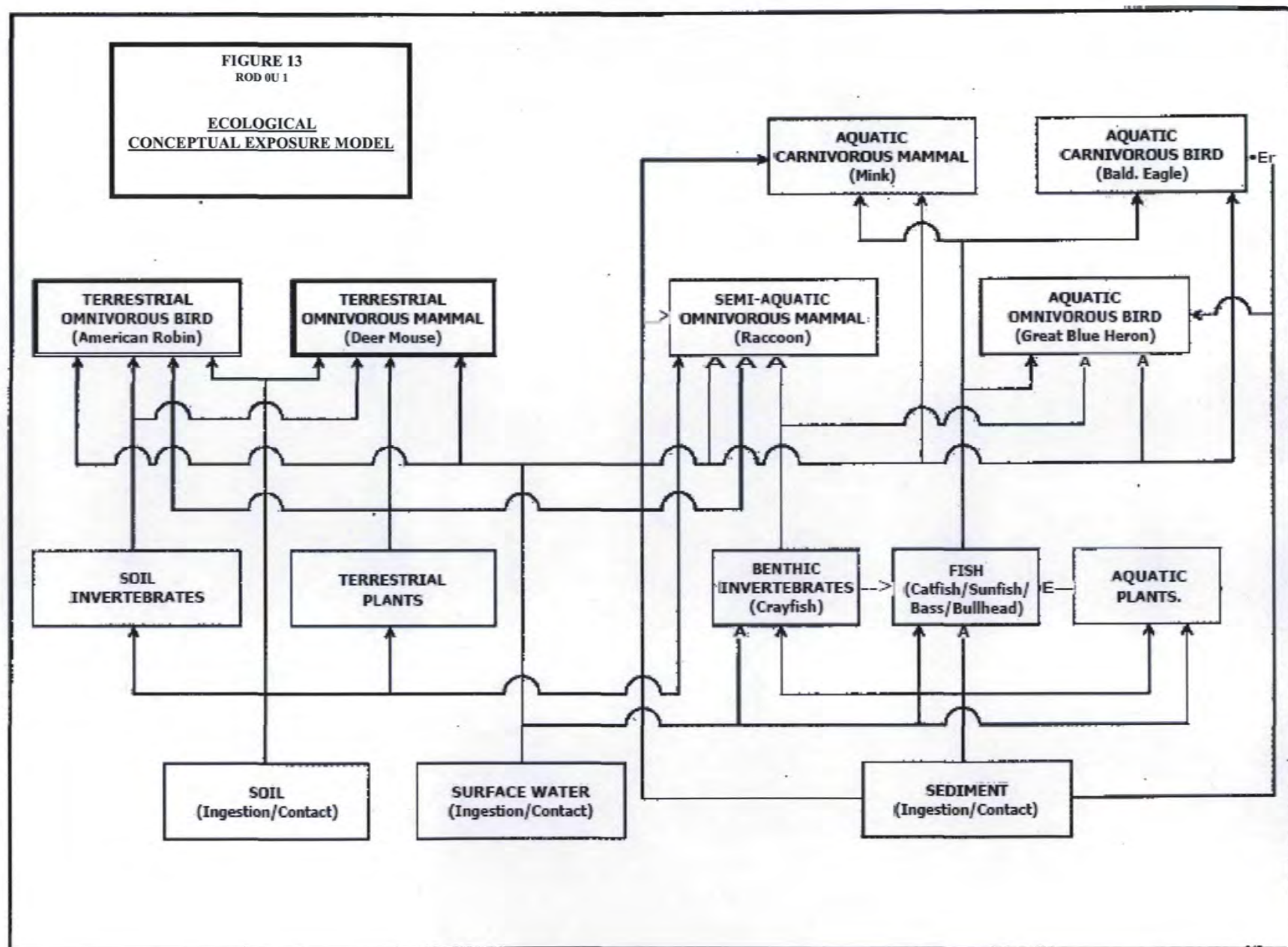


TABLE 8-1
EXPOSURE PATHWAYS

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Off /On Facility	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future Trespasser	Soils	Soils	Reach A	Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child trespasser incidentally ingests soil
						Dermal Contact	OFF	Quantitative	Adolescent child trespasser touches soil
	Sediments	Air	Reach A	Adolescent Child	7-16 yr	Inhalation	OFF	Quantitative	Adolescent child trespasser breathes airborne dust and VOCs
		Sediments	Reach A	Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child trespasser ingests sediment while wading
						Dermal Contact	OFF	Quantitative	Adolescent child trespasser touches sediment
		Surface Water	Reach A	Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child trespasser ingests surface water while wading
						Dermal Contact	OFF	Quantitative	Adolescent child trespasser touches surface water while wading
Future Resident/Wader	Sediments	Sediments	Combined Reaches B/C/D, Brier Creek Reservoir, and Brier Creek	Child	1- 6 yr	Ingestion	OFF	Quantitative	Child resident/wader ingests sediment while wading
						Dermal Contact	OFF	Quantitative	Child resident/wader touches sediment
				Adult	ED, 30 yr	Ingestion	OFF	Quantitative	Adult resident/wader ingests sediment while wading
						Dermal Contact	OFF	Quantitative	Adult resident/wader touches sediment
	Surface Water	Surface water	Combined Reaches B/C/D, Brier Creek Reservoir, and Brier Creek	Child	1- 6 yr	Ingestion	OFF	Quantitative	Child resident/wader ingests surface water while wading
						Dermal Contact	OFF	Quantitative	Child resident/wader touches surface water while wading
Current/Future Recreational Fisher	Fish	Fish	Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek to Neuse River	Child	1-6 yr	Ingestion	OFF	Quantitative	Younger child ingests fish
				Adolescent child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child ingests fish
				Adult	ED, 30 yr	Ingestion	OFF	Quantitative	Adult ingests fish
						Dermal Contact	OFF	Quantitative	Adult resident/wader touches surface water while wading
Current/Future Swimmer	Surface Water	Surface Water	Lake Crabtree	Child	1-6 yr	Ingestion	OFF	Quantitative	Child incidentally ingests surface water
						Dermal Contact	OFF	Quantitative	Child touches surface water
				Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child incidentally ingests surface water
						Dermal Contact	OFF	Quantitative	Adolescent child touches surface water
				Adult	ED, 30 yr	Ingestion	OFF	Quantitative	Adult incidentally ingests surface water
						Dermal Contact	OFF	Quantitative	Adult touches surface water
	Sediments	Sediments	Lake Crabtree	Child	1-6 yr	Ingestion	OFF	Quantitative	Child incidentally ingests sediment
						Dermal Contact	OFF	Quantitative	Child touches sediment
				Adolescent Child	7-16 yr	Ingestion	OFF	Quantitative	Adolescent child incidentally ingests sediment
						Dermal Contact	OFF	Quantitative	Adolescent child touches sediment
				Adult	ED, 30 yr	Ingestion	OFF	Quantitative	Adult incidentally ingests sediment
						Dermal Contact	OFF	Quantitative	Adult touches sediment

TABLE 8-2

RAGS Part D TABLE 5.1
NON-CANCER TOXICITY DATA - ORAL/DERMAL
Ward Transformer

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD		Oral Absorption Efficiency for Dermal (1)	Absorbed RfD for Dermal (1)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfD: Target Organ(s)	
		Value	Units		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
Acetophenone	Chronic	1.00E-01	mg/kg/day	1.0	1.00E-01	mg/kg/day	NA	3,000	IRIS	7/17/2006
Adon	Chronic	3.00E-05	mg/kg/day	1.0	3.00E-05	mg/kg/day	Liver	1,000	IRIS	7/17/2006
gamma-Chlordane	Chronic	5.00E-04	mg/kg/day	1.0	5.00E-04	mg/kg/day	Liver	300	IRIS	7/17/2006
4,4'-DDT	Chronic	5.00E-04	mg/kg/day	1.0	5.00E-04	mg/kg/day	Liver	100	IRIS	7/17/2006
Benz[a]pyrene	NA	NA	NA	1.0	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	Chronic	1.30E-05	mg/kg/day	1.0	1.30E-05	mg/kg/day	Liver	1,000	IRIS	7/17/2006
PCB Congener TEQ	NA	NA	NA	1.0	NA	NA	NA	NA	NA	NA
Ivodor 1260	Chronic	2.00E-05	mg/kg/day	1.0	2.00E-05	mg/kg/day	Ocular/Uroreproductive/Integument*	300	IRIS	7/17/2006
3,7,8 TCDD TEQ	NA	NA	NA	1.0	NA	NA	NA	NA	NA	NA
nBismuth	Chronic	1.00E+00	mg/kg/day	1.0	1.00E+00	mg/kg/day	CNS	NA	EPA, 2004b (EPA Region 9 PIRGs)	7/17/2006
Arsenic	Chronic	3.00E-04	mg/kg/day	1.0	3.00E-04	mg/kg/day	Integument *	3	IRIS	7/17/2006
Chromium	Chronic	3.00E-03	mg/kg/day	0.025	7.50E-05	mg/kg/day	NOEL	900	IRIS	7/17/2006
Urea	Chronic	3.00E-01	mg/kg/day	0.010	3.00E-03	mg/kg/day	Liver/Gastrointestinal/Body weight/Organ weight	NA	NCEA : Professional Judgement	7/17/2006
Manganese	Chronic	1.40E-01	mg/kg/day	0.040	1.40E-03	mg/kg/day	CNS	1	IRIS	7/17/2006
Total Mercury	Chronic	3.00E-04	mg/kg/day	1.0	3.00E-06	mg/kg/day	Immune System	NA	IRIS	7/17/2006
Strontium	Chronic	6.00E-01	mg/kg/day	0.010	6.00E-03	mg/kg/day	Bone	300	IRIS	7/17/2006
Vanadium	Chronic	1.00E-03	mg/kg/day	0.026	2.60E-05	mg/kg/day	Integument*	100	NCEA : HEAST	7/17/2006

(1) Source: EPA, 2004b; Exhibit 4.1.

Definitions:

* Integument includes skin, hair, nail, sebaceous and sweat glands.

CNS- enbrainnervous system

HEAST=Health Effects Assessment Summary Tables

IRIS=Integrated Risk Information System

NA=Not available

NCEA=National Center for Environmental Assessment

NOEL=No observed effect level

PFM = Provisional Peer Review Toxicity Values for Superfund

TABLE 8-3

RAGS Part D TABLE 5.2
NON-CANCER TOXICITY DATA – INHALATION
Ward Transformer

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC		Extrapolated RfD (1)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC Target Organ(s)	
		Value	Units	Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	Chronic	1.05E-04	mg/m3	3.00E-05	mg/kg/day	NA	NA	IRIS	7/17/2006
gamma-Chlordane	Chronic	7.00E-04	mg/m3	2.00E-04	mg/kg/day	Liver	1,000	IRIS	7/17/2006
4,4'-DDT	Chronic	1.75E-03	mg/m3	5.00E-04	mg/kg/day	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	Chronic	4.55E-05	mg/m3	1.10E-05	mg/kg/day	NA	NA	IRIS	7/17/2006
PCB Congener TEQ	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	Chronic	7.00E-05	mg/m3	2.00E-05	mg/kg/day	NA	NA	NA	NA
A3,7,8 TCDD TEQ	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	Chronic	4.90E-03	mg/m3	1.40E-03	mg/kg/day	NA	NA	PPRTV	7/17/2006
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	Chronic	7.70E-06	mg/m3	2.20E-06	mg/kg/day	Lung	90	IRIS	7/17/2006
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	Chronic	4.90E-05	mg/m3	1.40E-05	mg/kg/day	CNS	1,000	IRIS	7/17/2006
Total Mercury	Chronic	3.01E-04	mg/m3	8.60E-05	mg/kg/day	CNS	30	IRIS	7/17/2006
Strontium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA

(1) See Risk Assessment text for the derivation of the "Extrapolated RfD".

Definitions:

- Integument includes skin, hair, nail, sebaceous and sweat glands.
- CNS=Central nervous system
- IRIS=Integrated Risk Information System
- NA=Not available
- PPRTV = Provisional Peer Review Toxicity Values for Superfund

TABLE 8-4

RAGS Part D TABLE 6.1
 CANCER TOXICITY DATA - ORAU DERMAL
 Ward Transformer

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal (1)	Absorbed Cancer Slope Factor for Dermal (3)		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
etophenone	NA	NA	1.0	NA	NA	NA	NA	NA
a	1.70E+01	1/mg/kg/day	1.0	1.70E+01	1/mg/kg/day	B2	IRIS	7/17/2006
alpha-Chlordane	3.50E-01	1/mg/kg/day	1.0	3.50E-01	1/mg/kg/day	B2	IRIS	7/17/2006
,4'-DDT	3.40E-01	1/mg/kg/day	1.0	3.40E-01	1/mg/kg/day	B2	IRIS	7/17/2006
Benzo(a)pyrene	7.30E+00	1/mg/kg/day	1.0	7.30E+00	1/mg/kg/day	B2	IRIS	7/17/2006
Heptachlor Epoxide	9.10E+00	1/mg/kg/day	1.0	9.10E+00	1/mg/kg/day	B2	IRIS	7/17/2006
PCB Congener TEO	1.50E+05	1/mg/kg/day	1.0	1.50E+05	1/mg/kg/day	B2	HEAST	7/17/2006
rochlor 1260	2.00E+00	1/mg/kg/day	1.0	2.00E+00	1/mg/kg/day	B2	IRIS	7/17/2006
,3,7,8 TCDD TEO	1.50E+05	1/mg/kg/day	1.0	1.50E+05	1/mg/kg/day	B2	HEAST	7/17/2006
uranium	NA	NA	1.0	NA	NA	NA	NA	NA
manic	1.50E+00	1/mg/kg/day	1.0	1.50E+00	1/mg/kg/day	A	IRIS	7/17/2006
thiocyanate	NA	NA	0.025	NA	NA	NA	NA	NA
ran	NA	NA	0.010	NA	NA	NA	NA	NA
ganese	NA	NA	0.040	NA	NA	NA	NA	NA
ethyl Mercury	NA	NA	1.0	NA	NA	NA	NA	NA
trantium	NA	NA	0.010	NA	NA	NA	NA	NA
arsadure	NA	NA	0.025	NA	NA	NA	NA	NA

(1) Source: EPA, 2004b; Exhibit 4-1.

Definitions: A - Human carcinogen.

B1 - Probable human carcinogen - indicates that limited human data are available.

B2 - Probable human carcinogen - indicates sufficient evidence in animals and
 inadequate or no evidence in humans.

HEAST=Health Effects Assessment Summary Tables.

IRIS = Integrated Risk Information System.

NA = Not available.

TABLE 8-5

RAGS Part D TABLE 8.2
CANCER TOXICITY DATA - INHALATION
 Ward Transformer

Chemical of Potential Concern	Unit Risk		Inhalation Cancer Slope Factor		Weight of Evidence/ Cancer Guideline	Unit Risk: Inhalation CSP	
	Value	Units	Value	Units	Description	Source(s)	Date(s) (MM/DD/YYYY)
• etophenone	NA	NA	NA	NA	NA	NA	NA
dioxin	4.80E-03	1/pg/m3	1.70E+01	1/mg/kg/day	B2	IRIS	7/17/2006
alpha-Chlordane	1.00E-04	1/pg/m3	3.50E-01	1/mg/kg/day	B2	IRIS	7/17/2006
,4-DOT	9.71E-05	1/pg/m3	3.40E-01	1/mg/kg/day	B2	IRIS	7/17/2006
Benzo(a)pyrene	1.10E-03	1/pg/m3	3.85E+00	1/mg/kg/day	B2	Cal EPA	7/17/2006
oxychlor Epoxide	2.60E-03	1/pg/m3	9.10E+00	1/mg/kg/day	B2	IRIS	7/17/2006
PCB Congener TEQ	4.29E+01	1/pg/m3	1.50E+05	1/mg/kg/day	B2	IRIS	7/17/2006
for 1260	5.71E-04	1/pg/m3	2.00E+00	1/mg/kg/day	B2	IRIS	7/17/2006
,3,7,8 TCDD TEQ	4.29E+01	1/pg/m3	1.50E+05	1/mg/kg/day	B2	IRIS	7/17/2006
antimony	NA	NA	NA	NA	NA	NA	NA
arsenic	4.31E-03	1/pg/m3	1.51E+01	1/mg/kg/day	A	IRIS	7/17/2006
chromium	1.17E-02	1/pg/m3	4.10E+01	1/mg/kg/day	A	IRIS	7/17/2006
cadmium	NA	NA	NA	NA	NA	NA	NA
cyanide	NA	NA	NA	NA	NA	NA	NA
total Mercury	NA	NA	NA	NA	NA	NA	NA
chromium	NA	NA	NA	NA	NA	NA	NA
antimony	NA	NA	NA	NA	NA	NA	NA

Definitions:

- A - Human carcinogen.
- B1 - Probable human carcinogen - Indicates that limited human data are available.
- B2 - Probable human carcinogen - Indicates sufficient evidence in animals and inadequate or no evidence in humans.
- Cal EPA = California EPA
- IRI = Integrated Risk Information System
- NA=Not available

TABLE 8-6
Ward Transformer Risk Summary

Exposure Scenario by Exposure Subunit	Medium	Site Health Effects			
		ILCR	Percent of Total Site Risk	HI	Percent of Total Site Risk
		Reach A			
Current/Future Trespasser (See Tables 5-32 & 5-62-Aroclors)"					
Ingestion	SS	4.62E-06	16 (18)	0.78	9.5 (17)
Dermal Contact	SS	2.10E-05	71 (82)	3.84	47 (83)
Inhalation	SS	6.30E-11	2.1E-04 (2.5E-04)	2.20E-06	2.7E-05 (4.7E-05)
<i>Soil Subtotal</i>		<i>2.77E-05</i>		<i>4.63</i>	
Ingestion	SD	7.65E-07	2.6 (21)	0.11	1.3 (15)
Dermal Contact	SD	2.96E-06	10 (79)	0.61	7.4 (85)
<i>Sediment Subtotal</i>		<i>3.73E-06</i>		<i>0.72</i>	
Ingestion	SW	1.96E-07	0.66 (92)	0.29	3.5 (10)
Dermal Contact	SW	1.79E-08	6.0E-02 (8.3)	2.62	32 (90)
<i>Surface Water Subtotal</i>		<i>2.14E-07</i>		<i>2.91</i>	
<i>Site Total</i>	SS+SD+SW	2.96E-05		8.26	
Current/Future Trespasser (See Tables 5-33 & 5-63-PCB Congeners)"					
Ingestion	SS	8.31E-06	0.87 (18)	0.010	0.30 (4.7)
Dermal Contact	SS	3.84E-05	4.0 (82)	0.20	6.0 (95)
Inhalation	SS	1.09E-10	1.15E-05 (2.3E-04)	8.15E-07	2.5E-05 (4.0E-04)
<i>Soil Subtotal</i>		<i>4.67E-05</i>		<i>0.20</i>	
Ingestion	SD	1.59E-04	17 (18)	0.0031	0.10 (2.4)
Dermal Contact	SD	7.47E-04	78 (82)	0.13	3.9 (98)
<i>Sediment Subtotal</i>		<i>9.06E-04</i>		<i>0.13</i>	
Ingestion	SW	1.96E-07	0.021 (92)	0.29	9.0 (10)
Dermal Contact	SW	1.79E-08	0.002 (8.3)	2.62	81 (90)
<i>Surface Water Subtotal</i>		<i>2.14E-07</i>		<i>2.91</i>	
<i>Site Total</i>	SS+SD+SW	9.53E-04		3.25	
<i>Combined Reaches B/C/D, Brier Creek Reservoir, and Brier Creek</i>					
Future Child Resident/Wader (See Tables 5-34 & 5-64-Aroclors)"					
Ingestion	SD	7.09E-07	57 (94)	0.14	29 (76)
Dermal Contact	SD	4.43E-08	3.6 (5.9)	0.045	9.1 (24)
<i>Sediment Subtotal</i>		<i>7.53E-07</i>		<i>0.19</i>	
Ingestion	SW	3.29E-07	27 (67)	0.090	18 (30)
Dermal Contact	SW	1.59E-07	13 (33)	0.21	43 (70)
<i>Surface Water Subtotal</i>		<i>4.88E-07</i>		<i>0.30</i>	
<i>Site Total</i>	SD+SW	1.24E-06		0.49	
Future Child Resident/Wader (See Tables 5-35 & 5-65-PCB Congeners)"					
Ingestion	SD	2.20E-05	89 (91)	0.073	18 (66)
Dermal Contact	SD	2.28E-06	9.2 (9)	0.037	9.0 (34)
<i>Sediment Subtotal</i>		<i>2.43E-05</i>		<i>0.11</i>	
Ingestion	SW	3.29E-07	1.3 (67)	0.090	22 (30)
Dermal Contact	SW	1.59E-07	0.64 (33)	0.21	52 (70)
<i>Surface Water Subtotal</i>		<i>4.88E-07</i>		<i>0.30</i>	
<i>Site Total</i>	SD+SW	2.48E-05		0.41	
Future Adult Resident/Wader (See Tables 5-36 & 5-66-Aroclors)"					
Ingestion	SD	3.80E-07	14 (21)	0.015	3.2 (5.0)
Dermal Contact	SD	1.46E-06	53 (79)	0.29	62 (95)
<i>Sediment Subtotal</i>		<i>1.84E-06</i>		<i>0.31</i>	
Ingestion	SW	3.52E-07	13 (39)	0.019	4.0 (11)
Dermal Contact	SW	5.55E-07	20 (61)	0.15	31 (89)
<i>Surface Water Subtotal</i>		<i>9.03E-07</i>		<i>0.17</i>	
<i>Site Total</i>	SD+SW	2.75E-06		0.48	

TABLE 8-6 (continued)

Exposure Scenario by Exposure Subunit	Site Health Effects				
	Medium	ILCR	Percent of Total Site Risk'	HI	Percent of Total Site Risk'
'Combined Reaches B/C/D, Bier Creek Reservoir, and Brier Creek (continued).					
Future Adult Resident/Wader (See Tables 5-37 & 5-67-PCB Congeners)"					
Ingestion	SD	1.18E-05	13 (14)	0.0078	1.9 (3.1)
Dermal Contact	SD	7.49E-05	86 (86)	0.24	58 (97)
Sediment Subtotal		8.67E-05		0.25	
Ingestion	SW	3.52E-07	0.40 (39)	0.019	4.6 (11)
Dermal Contact	SW	5.55E-07	0.63 (61)	0.15	35 (89)
Surface Water Subtotal		9.08E-07		0.17	
Site Total	SD+SW	8.76E-05		0.42	
Brier Creek Reservoir					
Current/Future Younger Child Recreational Fisherman (See Tables 5-38 & 5-68-Aroclors)"					
Fish Ingestion	FT	1.05E-04	100	30.7	100
Total	FT	1.05E-04		30.7	
Current/Future Younger Child Recreational Fisherman (See Tables 5-39 & 5-69-PCB Congeners)"					
Fish Ingestion	FT	1.14E-04	100	1.18	100
Total	FT	1.14E-04		1.18	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-40 & 5-70-Aroclors)"					
Fish Ingestion	FT	8.46E-05	100	14.8	100
Total	FT	8.46E-05		14.8	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-41 & 5-71-PCB Congeners)"					
Fish Ingestion	FT	9.18E-05	100	0.57	100
Total	FT	9.18E-05		0.57	
Current/Future Adult Recreational Fisherman (See Tables 5-42 & 5-72-Aroclors)"					
Fish Ingestion	FT	5.01E-04	100	29.2	100
Total	FT	5.01E-04		29.2	
Current/Future Adult Recreational Fisherman (See Tables 5-43 & 5-73-PCB Congeners)"					
Fish Ingestion	FT	5.44E-04	100	1.12	100
Total	FT	5.44E-04		1.12	
Lake Crabtree ga					
Current/Future Younger Child Recreational Fisherman (See Tables 5-44 & 5-74-Aroclors)"					
Fish Ingestion	FT	6.78E-05	100	17.8	100
Total	FT	6.78E-05		17.8	
Current/Future Younger Child Recreational Fisherman (See Tables 5-45 & 5-75-PCB Congeners)"					
Fish Ingestion	FT	1.44E-04	100	---	NC
Total	FT	1.44E-04		---	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-46 & 5-76-Aroclors)"					
Fish Ingestion	FT	5.44E-05	100	8.57	100
Total	FT	5.44E-05		8.57	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-47 & 5-75-PCB Congeners)"					
Fish Ingestion	FT	1.16E-04	100	---	NC
Total	FT	1.16E-04		---	
Current/Future Adult Recreational Fisherman (See Tables 5-48 & 5-78-Aroclors)"					
Fish Ingestion	FT	3.22E-04	100	16.9	100
Total	FT	3.22E-04		16.9	
Current/Future Adult Recreational Fisherman (See Tables 5-49 & 5-79-PCB Congeners)"					
Fish Ingestion	FT	6.87E-04	100	---	NC
Total	FT	6.87E-04		---	

TABLE 8-6 (continued)

Ward Transformer Risk Summary

Exposure Scenario by Exposure Subunit	Medium	Site Health Effects			
		ILCR	Percent of Total Site Risk	HI	Percent of Total Site Risk
	Lake Crabtree(continued)				
Current/Future Younger Child Swimmer (See Tables 5-56 & 5-86-Aroclors)					
Ingestion	SD	3.16E-08	91	0.067	69
Dermal Contact	SD	3.31E-09	9.5	0.030	31
Site Total	SD	3.49E-08		0.10	
Current/Future Younger Child Swimmer (See Tables 5-57 & 5-87-PCB Congeners)"					
Ingestion	SD	8.27E-06	91	0.058	67
Dermal Contact	SD	8.66E-07	9.5	0.029	33
Site Total	SD	9.13E-06		0.087	
Current/Future Adolescent Child Swimmer (See Tables 5-58 & 5-88-Aroclors)"					
Ingestion	SD	9.39E-09	18	0.012	4.8
Dermal Contact	SD	4.42E-08	82	0.24	95
Site Total	SD	5.36E-08		0.25	
Current/Future Adolescent Child Swimmer (See Tables 5-59 & 5-89-PCB Congeners)"					
Ingestion	SD	2.46E-06	18	0.010	4.3
Dermal Contact	SD	1.16E-05	82	0.23	96
Site Total	SD	1.40E-05		0.24	
Current/Future Adult Swimmer (See Tables 5-60 & 5-90-Aroclors)"					
Ingestion	SD	1.41E-08	11	0.0072	3.5
Dermal Contact	SD	1.09E-07	89	0.20	96
Site Total	SD	1.23E-07		0.20	
Current/Future Adult Swimmer (See Tables 5-61 & 5-91-PCB Congeners)"					
Ingestion	SD	3.69E-06	11	0.0062	3.2
Dermal Contact	SD	2.86E-05	89	0.19	97
Site Total	SD	3.23E-05		0.20	
Crabtree Creek					
Current/Future Younger Child Recreational Fisherman (See Tables 5-50 & 5-80-Aroclors)"					
Fish Ingestion	FT	1.13E-05	100	3.29	100
Total	FT	1.13E-05		3.29	
Current/Future Younger Child Recreational Fisherman (See Tables 5-51 & 5-81-PCB Congeners)"					
Fish Ingestion	FT	3.16E-05	100	---	NC
Total	FT	3.16E-05		---	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-52 & 5-82-Aroclors)"					
Fish Ingestion	FT	9.07E-06	100	1.59	100
Total	FT	9.07E-06		1.59	
Current/Future Adolescent Child Recreational Fisherman (See Tables 5-53 & 5-83-PCB Congeners)"					
Fish Ingestion	FT	2.54E-05	100	---	NC
Total	FT	2.54E-05		---	
Current/Future Adult Recreational Fisherman (See Tables 5-54 & 5-84-Aroclors)"					
Fish Ingestion	FT	5.37E-05	100	3.13	100
Total	FT	5.37E-05		3.13	
Current/Future Adult Recreational Fisherman (See Tables 5-55 & 5-85-PCB Congeners)"					
Fish Ingestion	FT	1.50E-04	100	---	NC
Total	FT	1.50E-04		---	

Note: Shaded areas equal site ILCR greater than 1E-04 or HI greater than 1.0

* Numbers in parentheses represent percent of medium risk

These tables represent the Range Part D format 7 and 9, respectively.

FT = Fish Fat

HI = Hazard Index

ILCR = Lifetime incremental cancer risk

SD = Sediment

NC = Not calculated. In this medium and reach, there were no carcinogenic COPCs.

SS = Surface soils (0 to 1 ft).

SW = Surface Water.

TABLE 8-7**Exposure Point Concentration for Tissue
Little Brier Creek and Tributaries**

PCBs/Dioxins	Units	Individual Whole Body Tissue Samples		
		Crayfish	Sunfish	Bullhead
PCB-1260 (Aroclor 1260)	mg/kg	11	75	22
PCB Congener TEQ (Birds)	ng/kg	98.0	428	99.8
PCB Congener TEQ (Fish)	ng/kg	5.05	23.3	5.74
PCB Congener TEQ (Humans/Mammals)	ng/kg	115	591	147
Dioxins/furans TEQ (Birds)	ng/kg	15.7	21.9	15.5
Dioxins/furans TEQ (Fish)	ng/kg	4.55	6.04	7.07
Dioxins/furans TEQ (Humans/Mammals)	ng/kg	4.92	6.57	7.15
D/F & PCB TEQ (Birds)	ng/kg	114	450	115
D/F & PCB TEQ (Fish)	ng/kg	9.61	29.4	12.8
D/F & PCB TEQ (Humans/Mammals)	ng/kg	120	598	154

Tissue data for all species collected within the reach are presented. The same species were not found in each reach.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

TABLE 8-8

Exposure Point Concentration for Tissue: Brier Creek Reservoir

PCB/Dioxins	Units	Individual Whole Body Tissue Samples								
		Sunfish I	Sunfish	Sunfish	Sunfish	Sunfish	Bass I	Bass	Bass	Bullhead
PCB-1260 (Aroclor 1260)	mg/kg	2.5	2.5	2.4	0.38	0.62	--	--	--	2.4(filet)
PCB Congener TEQ (Birds)	ng/kg	16.6	16.6	17.8	63.1	63.2	158	89.3	75.7	64.8
PCB Congener TEQ (Fish)	ng/kg	0.808	0.766	0.878	1.45	1.47	8.02	4.84	3.74	2.75
PCB Congener TEQ (Humans/Mammals)	ng/kg	19.6	17.8	21.0	29.1	29.7	178	119	88.6	65.0
Dioxins/furans TEQ (Birds)	ng/kg	1.73	1.49	1.10	0.981	1.87	--	--	--	--
Dioxins/furans TEQ (Fish)	ng/kg	0.559	0.411	0.38	0.313	0.664	--	--	--	--
Dioxins/furans TEQ (Humans/Mammals)	ng/kg	0.588	0.451	0.389	0.33	0.703	--	--	--	--
D/F & PCB TEQ (Birds)	ng/kg	18.3	18.1	18.9	64.1	65.1	--	--	--	--
D/F & PCB TEQ (Fish)	ng/kg	1.37	1.18	1.26	1.77	2.14	--	--	--	--
D/F & PCB TEQ (Humans/Mammals)	ng/kg	20.2	18.3	21.4	29.4	30.4	--	--	--	--

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical in each trophic level [bottom feeder (catfish) and predator (sunfish and bass)]. Maximum detected Aroclor 1260 concentration in file presented for bullhead because whole body sample was not analyzed for Aroclors. Thus, the file tissue data for Aroclors is also provided in Appendix 1, Table 1.1-2.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

-- = Not analyzed.

TABLE 8-9

**Exposure Point Concentration for Tissue
Brier Creek (Below Brier Creek Reservoir)**

IPCBs/Dioxins	Units	Individual Whole Body Tissue Samples		
		Crayfish	Sunfish	Bullhead
PCB-1260 (Aroclor 1260)	mg/kg	0.074	0.49	0.5
PCB Congener TEQ (Birds)	ng/kg	62.9	63.1	63.1
PCB Congener TEQ (Fish)	ng/kg	1.42	1.46	1.46
PCB Congener TEQ (Humans/Mammals)	ng/kg	28.1	29.2	29.0
Dioxins/furans TEQ (Birds)	ng/kg	0.975	1.26	1.63
Dioxins/furans TEQ (Fish)	ng/kg	0.319	0.388	0.669
Dioxins/furans TEQ (Humans/Mammals)	ng/kg	0.338	0.405	0.7
D/F & PCB TEQ (Birds)	ng/kg	63.8	64.4	64.7
D/F & PCB TEQ (Fish)	ng/kg	1.74	1.84	2.13
D/F & PCB TEQ (Humans/Mammals)	ng/kg	28.4	29.6	29.7

Tissue data for all species collected within the reach are presented.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

TABLE 8-10

Exposure Point Concentration for Tissue
Lake Crabtree

PCBs/Dioxins	Units	Individual Whole Body Tissue Samples						
		Sunfish IL	Sunfish	Sunfish	Bass	Bass	Catfish	Catfish
PCB-1260 (Aroclor 1260)	ng/kg	0.9	0.17	0.15	0.12	0.19	0.31	0.062
PCB-1260 (Aroclor 1260) - Fillet *								0.713
PCB Congener TEQ (Birds)	ng/kg	63.6	63.0	62.9	4.87	5.25	14.0	4.82
PCB Congener TEQ (Fish)	ng/kg	1.51	1.44	1.43	0.26	0.28	0.79	0.25
PCB Congener TEQ (Humans/Mammals)	ng/kg	31.2	28.5	28.3	5.53	7.04	19.4	5.38
Dioxins/furans TEQ (Birds)	ng/kg	0.657	0.454	0.721	-	-	-	-
Dioxins/furans TEQ (Fish)	ng/kg	0.317	0.281	0.252	-	-	-	-
Dioxins/furans TEQ (Humans/Mammals)	ng/kg	0.341	0.293	0.269	-	-	-	-
D/F & PCB TEQ (Birds)	ng/kg	64.2	63.4	63.6	4.87	5.25	14.0	4.82
D/F & PCB TEQ (Fish)	ng/kg	1.83	1.72	1.68	0.26	0.28	0.79	0.25
D/F & PCB TEQ (Humans/Mammals)	ng/kg	31.6	28.8	28.5	5.53	7.04	19.4	5.38

* Average 2003 fillet sample result is presented because concentrations (0.67, 1.3, 1.7 mg/kg) were higher in fillet than whole body samples.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical in each trophic level [bottomfeeder (catfish) and predator (sunfish and bass)]

Tissue data for all species collected within the reach are presented.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

- = Not analyzed

TABLE 8-11

**Exposure Point Concentration for Tissue
Crabtree Creek**

PCBs/Dioxins	Units	Individual Whole Body Tissue Samples										Catfish (filet)*
		Crayfish	Crayfish	Crayfish	Sunfish	Sunfish	Sunfish	Bass (filet)*	Catfish	Catfish	Catfish	
CB-1260 (Aroclor 1260)	mg/kg	0.18	0.15	0.095	0.15	0.09	0.59	--	--	0.064	0.074	0.34
B Congener TEQ (Birds)	mg/kg	5.2E-06	4.9E-06	4.7E-06	5.1E-06	4.7E-06	5.1E-06	6.35E-06	5.9E-06	4.7E-06	4.8E-06	7.12E-06
CB Congener TEQ (Fish)	mg/kg	2.8E-07	2.6E-07	2.5E-07	2.7E-06	2.5E-07	3.3E-07	--	3.3E-07	2.5E-07	2.5E-07	--
CB Congener TEQ (Humans/Mammals)	mg/kg	6.3E-06	5.5E-06	5.4E-06	5.8E-06	5.3E-06	6.6E-06	--	6.7E-06	5.3E-06	5.4E-06	6.83E-06

* Fillet sample results presented because concentrations were higher in fillet than whole body samples. Thus, fillet tissue data for PCB congeners is also provided in Appendix 1, Table 1-1.5.

Tissue data for all species collected within the reach are presented.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical in each trophic level (bottom feeder (catfish) and predator (sunfish and bass))

TABLE 8-12

PCBs and PCB Congeners Measured in Surface Water

Field Sample ID	Parameter Name	Concentration
Little Brier Creek and Tributaries*		
SW03-01	PCB-1260 (Aroclor 1260)	1.5
SW04-01	PCB-1260 (Aroclor 1260)	0.86 J
SW05-01	PCB-1260 (Aroclor 1260)	0.46 J
SW10	PCB-1260 (Aroclor 1260)	0.31 J
SW11	PCB-1260 (Aroclor 1260)	0.17 J
SW12/SW13 (Duplicates)	PCB-1260 (Aroclor 1260)	0.47 J/0.35 J
Lake Crabtree		
SW14	PCB Congeners	ND
SW15	PCB Congeners	ND
SW16	PCB Congeners	ND

All surface water samples collected 5/11/2003, 12/13/2005, and 2/28/2006.

All concentrations in µg/L.

* PCBs were nondetect in other surface water samples (SW01, SW02, SW06 - SW09).

ND = Not detected above detection limit. Detection limits ranged from 0.0019 to 0.0039 µg/L.

J = Estimated value.

TABLE 8-13

Exposure Point Concentrations for Sediment: Little Brier Creek and Tributaries

Location	Reach	Depth (feet)		Parameter									Aroclor 1260 ug/kg
				Dioxins/furans TEQ			PCB Congener TEQ			D/F & PCB TEQ			
				Birds: ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds: ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds: ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	
SD01	B	0	0.5	1.9	1.49	1.67	1480	61.2	1200	1480	62.7	1200	72 U
SD02	B	0	0.5	1.7	1.47	1.22	150	3.37	60.5	152	4.83	61.7	46
SD04	A	0	0.5	123	52.4	54.7	2910	118	2300	3030	170	2360	1400
		0.5	1	4.78	2.24	2.7	2970	131	2600	2970	133	2610	1200
		1	1.5	4.21	1.85	2.27	1180	36.7	701	1180	38.6	704	560
		1.5	2	4.72	1.67	2.08	1790	58	1100	1800	59.8	1100	1100
SD05	A	0	0.5	8.3	6.15	6.08	11000	393	7520	11000	399	7520	5500
SD06	A	0	0.5	144	97.4	98.9	110000	5280	105000	110000	5370	105000	44000
		0.5	1	--	--	--	--	--	--	--	--	--	62000
		1	1.5	2.06	1.23	1.29	6300	92.7	1560	6300	94	1560	1700
		1.5	2	2.71	1.68	1.8	8500	151	2660	8500	152	2660	3500
		2	2.5	5.17	3.27	3.41	32800	138	27000	32800	1380	27000	10000
		2.5	3	4.56	3.37	3.5	4710	49.8	767	4710	53.2	770	2000
SD07	A	0	0.5	72.8	48.9	49.5	79900	3770	75000	79900	3820	75100	40000
		0.5	1	--	--	--	--	--	--	--	--	--	53000
SD08	A	0	0.5	5.6	5.66	5.71	17300	829	16500	17300	835	16500	10000
		0.5	1	--	--	--	--	--	--	--	--	--	7400
SD09	A	0	0.5	89.1	41.3	42.7	15000	615	12000	15100	657	12100	7500
		0.5	1	--	--	--	--	--	--	--	--	--	26000
SD10	A	0	0.5	18.3	8.36	8.65	5640	217	4210	5650	226	4220	2900
SD11	A	0	0.5	24.4	11.4	11.7	5840	223	4310	5860	234	4320	2900
SD12	A	0	0.5	14.3	7.11	7.29	14600	568	11000	14700	575	11000	7100
		0	0.5	16.5	8.26	8.47	79100	3770	75100	79100	3780	75100	34000
SD13	B	0	0.5	1.4	1.15	1.99	983	26.9	491	984	28	493	310
SD14	B	0	0.5	3.01	1.69	1.97	4570	216	4300	4570	218	4300	2100
		0.5	1	--	--	--	--	--	--	--	--	--	690
		1	1.5	1.52	1.09	1.5	1730	75.7	1500	1730	76.8	1500	730
		1.5	2	4.27	2.9	2.96	2010	78.6	1550	2010	81.5	1550	1800
SD15	B	0	0.5	2.18	1.09	1.18	1630	75.6	1500	1630	76.7	1500	950
SD16	B	0	0.5	2.61	1.3	1.51	1350	47.2	901	1360	48.5	902	460
SD17	B	0	0.5	0.365	0.218	0.23	460	18.9	370	4600	19.1	371	230
SD18	B	0	0.5	1.7	0.979	1.08	533	22.2	436	534	23.1	437	270
		0.5	1	--	--	--	--	--	--	--	--	--	680
SD19	B	0	0.5	3.66	1.91	2.17	1800	78.6	1550	1800	80.5	1550	930
		0.5	1	--	--	--	--	--	--	--	--	--	2600
		1	1.5	3.85	2.19	2.27	1810	67.1	1300	1810	69.3	1300	3002
		1.5	2	18.2	4.29	5	2130	95.7	1900	2150	100	1910	1500
SD20	B	0	0.5	2.62	1.31	1.58	685	28.1	551	688	29.4	553	290
		0.5	1	--	--	--	--	--	--	--	--	--	910
SD21	C	0	0.5	0.82	0.361	0.395	590	25.4	501	591	25.7	501	330
SD22	C	0	0.5	10.3	6.34	6.55	6140	256	5000	6150	262	5010	2600
		0.5	1	--	--	--	--	--	--	--	--	--	2300
		1	1.5	1.83	0.908	0.933	860	37.4	741	862	38.4	742	270
		1.5	1.9	2.58	1.33	1.43	1100	44.4	871	1100	45.7	872	402
SD23	C	0	0.5	1.04	0.482	0.541	540	19.7	381	541	20.2	381	240
		0.5	1	--	--	--	--	--	--	--	--	--	150
SD24	C	0	0.5	2.72	1.46	1.75	2010	93.2	1850	2010	94.7	1850	1200
		0.5	1	--	--	--	--	--	--	--	--	--	760
SD25	C	0	0.5	0.788	0.54	0.548	523	22.3	441	523	22.9	441	220
		0.5	1	--	--	--	--	--	--	--	--	--	950
SD26	C	0	0.5	3.38	1.41	1.64	805	35.4	701	808	36.8	702	410
SD27	C	0	0.5	0.806	0.438	0.486	415	18.6	326	416	17.1	326	200
SD28	C	0	0.5	3.08	1.34	1.55	2450	104	2050	2450	106	2050	1300
		0.5	1	5.03	2.78	2.97	2310	49.9	903	2310	52.7	906	1500
		1	1.5	3.96	2.26	2.55	888	26.5	496	892	28.7	499	1400
		1.5	2	--	--	--	--	--	--	--	--	--	730
SD29	D	0	0.5	0.261	0.197	0.195	163	3.65	65.5	163	3.85	65.7	20
SD30	D	0	0.5	0.259	0.195	0.189	150	3.37	60.5	150	3.56	60.7	20
SD31	D	0	0.5	0.245	0.194	0.197	163	3.65	65.5	163	3.84	65.7	23

TABLE 8-13 (con't)

Exposure Point Concentrations for Sediment: Little Brier Creek and Tributaries

Location	Reach	Depth (feet)	Parameter										
			Dioxins/furans TEQ			PCB Congener TEQ			D/F & PCB TEQ			Aroclor 1260 ug/kg	
			Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/ Mammals * II	Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg		
SD32	D	0.5	1	21.4	11.6	12.6	3260	127	2500	5280	139	2520	4200
SD33	D	0	0.5	1.45	0.612	0.652	190	5	92.5	191	5.61	93.2	25
SD34	D	0	0.5	0.293	0.214	0.206	163	3.65	65.5	163	3.86	65.7	36
SD35	D	0	0.25	0.285	0.238	0.225	163	3.65	65.5	163	3.89	65.8	29
SD36	D	0	0.66	1.4	0.74	0.971	250	7.91	151	251	8.65	152	110
SD37	D	1.25	1.66	2.66	1.47	1.82	608	19.5	371	610	21	373	580
SD50A	A	0	1	--	--	--	--	--	--	--	--	--	1500
SD51A	A	0	1	--	--	--	--	--	--	--	--	--	360
SD51B		1	2	--	--	--	--	--	--	--	--	--	24
SD51C		2	3	--	--	--	--	--	--	--	--	--	14
SD52A	A	0	1	--	--	--	443	8.6	209	443	8.6	209	2500
SD53A	A	0	1	--	--	--	1610	78.3	2000	1610	78.3	2000	11000
SD54A	A	0	1	--	--	--	--	--	--	--	--	--	6400
SD54B		1	2	--	--	--	--	--	--	--	--	--	1600
SD54C		2	3	--	--	--	--	--	--	--	--	--	2300
SD55A	A	0	1	--	--	--	--	--	--	--	--	--	3500
SD56A	A	0	1	--	--	--	--	--	--	--	--	--	20800
SD57A	A	0	1	--	--	--	--	--	--	--	--	--	6900
SD57B		1	2	--	--	--	--	--	--	--	--	--	2700
SD57C		2	3	--	--	--	--	--	--	--	--	--	360
SD58A	A	0	1	--	--	--	--	--	--	--	--	--	27000
SD59A	A	0	1	--	--	--	--	--	--	--	--	--	2700
SD60A	A	0	1	--	--	--	--	--	--	--	--	--	780
SD60B		1	2	--	--	--	--	--	--	--	--	--	330
SD60C		2	3	--	--	--	--	--	--	--	--	--	350
SD61A	A	0	1	--	--	--	--	--	--	--	--	--	3500
SD62A	A	0	1	--	--	--	590	29	700	590	29	700	25000
SD32	D	0	1	--	--	--	--	--	--	--	--	--	45
SD37	D	1.5	2.5	--	--	--	--	--	--	--	--	--	310
SD34	D	2	2.5	--	--	--	--	--	--	--	--	--	44
Frequency of Detection				52/52	52/52	52/52	55/55	55/55	55/55	55/55	55/55	55/55	67/69
Minimum				0.245	0.194	0.189	150	3.37	60.5	150	3.56	60.7	14
Maximum				144	97.4	98.9	110000	5280	105000	110000	5370	105000	62000
95%UCL*				38.0	21.5	10.5	12986	532	12640	13411	639	12654	16456
Bias				a	a	b	b	b	b	b	b	b	b

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

* 95 percent upper confidence limit (95UCL) was calculated using ProUCL, Version 3.0.

a = 97.5% Chebyshev (Mean, SD) UCL

b = 95% H-UCL

The exposure point concentration is the 95% UCL concentration.

PCB = Polychlorinated biphenyl.

D/F = Dioxin/furan.

TABLE 8-14

Exposure Point Concentrations for Sediment: Banks of Little Brier Creek and Tributaries

Location	Depth (feet)		Dioxins/furans TEQ			Parameter PCB Congener TEQ			D/F & PCB TEQ			Aroclor 1260 ng/kg
			Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/ Mammals ng/kg	
	0	0.5	144	97.4	98.9	110000	5280	105000	110000	5370	105000	
SD05	0.5	1	--	--	--	--	--	--	--	--	--	62000
	1	1.5	2.06	1.23	1.29	5200	32.7	1540	6300	94	1560	1700
	1.5	2	2.71	1.58	1.8	8500	151	2640	6500	152	2650	3500
	2	2.5	5.17	3.27	3.41	32800	138	27000	32800	1380	27000	10000
	2.5	3	4.56	3.37	3.5	4710	49.8	767	4710	53.2	770	2000
SD08	0	0.5	8.6	5.66	5.71	17300	829	16500	17300	835	16500	10000
	0.5	1	--	--	--	--	--	--	--	--	--	7400
SD10	0	0.5	18.3	8.35	8.65	3640	317	4210	3650	226	4220	2900
SD12	0	0.5	14.3	7.11	7.29	14600	568	11000	14700	575	11000	7100
	0	0.5	15.5	8.26	8.47	79100	3770	75100	79100	3780	75100	24000
SD14	0	0.5	3.01	1.62	1.97	4570	316	4300	4570	218	4300	2100
	0.5	1	--	--	--	--	--	--	--	--	--	690
	1	1.5	1.52	1.09	1.3	1750	75.7	1530	1750	76.8	1500	730
	1.5	2	4.27	2.9	2.95	2010	78.6	1550	2010	81.5	1550	1800
SD16	0	0.5	2.61	1.3	1.31	1350	47.2	901	1350	48.5	902	460
SD18	0	0.5	1.7	0.979	1.08	535	22.2	436	534	23.1	437	270
	0.5	1	--	--	--	--	--	--	--	--	--	580
SD20	0	0.5	2.62	1.31	1.38	685	28.1	551	687	29.2	552	390
	0.5	1	--	--	--	--	--	--	--	--	--	910
SD22	0	0.5	13.1	6.34	6.55	1140	256	5000	6150	262	5010	2600
	0.5	1	--	--	--	--	--	--	--	--	--	2300
	1	1.5	1.63	0.908	0.933	860	37.4	741	862	38.4	742	270
	1.5	2	3.56	1.33	1.43	1100	444	871	1100	45.7	872	400
SD24	0	0.5	2.72	1.46	1.75	2010	93.2	1650	2010	94.7	1650	1200
	0.5	1	--	--	--	--	--	--	--	--	--	750
SD26	0	0.5	3.38	1.41	1.54	905	35.4	701	805	36.8	702	410
SD28	0	0.5	3.08	1.34	1.55	2450	104	2050	2450	106	2050	1300
	0.5	1	5.09	2.79	2.97	2310	49.9	903	2310	52.7	905	1300
	1	1.5	3.96	2.26	2.55	888	25.5	495	892	28.7	499	1400
	1.5	2	--	--	--	--	--	--	--	--	--	730
Frequency of Detection			23/33	11/31	11/31	11/15	11/31	11/11	11/11	11/31	11/31	23/33
Minimum			1.52	0.91	0.93	532	22.2	436	534	23.1	437	270
Maximum			144	97	98.9	110000	5280	105000	110000	5370	105000	62000
95%UCL*			69.42	46.3	47.1	27364	3090	52524	27353	3158	62525	29969
Basis			a	a	a	b	a	a	a	a	a	a

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations

* 95 percent upper confidence limit (95UCL) was calculated using ProUCL, Version 3.0.

a = 99% Chebyshev (Mean, SD) UCL

b = 95% Chebyshev MVUE UCL

PCB = Polychlorinated biphenyl.

D/F = Dioxin/furan

The exposure point concentration is the 95% UCL concentration.

The higher of duplicate samples used; used lower detection limit if both non-detects or detected concentration if one detect and one non-detect.

TABLE 8-15

**Exposure Point Concentrations for Sediment
Brier Creek Reservoir**

Location	Parameter									
	PCB Congener TEQ			Dioxins/furans TEQ			D/F & PCB TEQ			Aroclor 1260 ug/kg
	Birds ng/kg	Fish ug/kg	Humans/Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/Mammals ng/kg	Birds ng/kg	Fish ng/kg	Humans/Mammals ng/kg	
PS01	318	11.4	221	0.845	0.764	1.01	318	12.2	223	57
PS02	398	6.46	115	6.83	6.35	6.97	294	12.8	123	94
PS03	388	8.7	159	8.13	7.4	8.22	396	16.1	164	110
SD63A	0.0645	5.15	1.56	--	--	--	--	--	--	310
SD63B	--	--	--	--	--	--	--	--	--	45 U
SD64A	--	--	--	--	--	--	--	--	--	47
SD64B	--	--	--	--	--	--	--	--	--	42 U
SD65A	--	--	--	--	--	--	--	--	--	42 U
SD65B	--	--	--	--	--	--	--	--	--	42 U

-- = Not analyzed

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical.

TABLE 8-16

**Exposure Point Concentrations for Sediment
Brier Creek (Below Brier Creek Reservoir)**

Location	Parameter			
	PCB Congener TEQ			Aroclor 1260
	Birds	Fish	Humans/Mammals	
	ng/kg	ng/kg	ng/kg	ug/kg
SD38	163	3.65	65.5	43 U
SD66A	0.028	1.06	0.589	280
SD66B	—	—		59

U = Not detected.

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

PCB = Polychlorinated biphenyl.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical.

TABLE 8-17

**Exposure Point Concentrations for Sediment
Lake Crabtree**

Location	Parameter			
	PCB Congener TEQ (Birds) ng/kg	PCB Congener TEQ (Fish) ng/kg	PCB Congener TEQ (Humans/Mammals) ng/kg	PCB-1260 (Aroclor 1260) ug/kg
SD39	1360	55.9	1100	480
SD40	208	4.46	79.7	1.6
SD41	62.0	1.30	23.2	5.7
SD67A	0.049	2.60	1.1	150
SD67B	--	--	--	19
SD68A	--	--	--	120 U
SD68B	--	--	--	42 U
SD69A	0.00006	0.0041	0.0014	120
SD69B	--	--	--	110
SD70A	--	--	--	180
SD70B	--	--	--	99
SD71A	0.023	1.02	0.46	17
SD71B	--	--	--	41 U
SD72A	--	--	--	39 U
SD73A	--	--	--	43 U
SD74A	--	--	--	42 U
SD75A	--	--	--	40 U
SD76A	--	--	--	41 U
SD77A	--	--	--	40 U
SD78A	--	--	--	40 U

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical.

PCB = Polychlorinated biphenyl.

-- = Not analyzed.

TABLE 8-18

**Exposure Point Concentrations for Sediment
Crabtree Creek**

Location	PCB Congener TEQ (ug/kg)			Aroclor 1260 (ug/kg)
	Birds	Fish	Humans/Manunals	
SD46	230	5.17	92.8	58 U
SD47	243	5.45	97.9	60 U
SD49	250	5.62	101	63 U
SD80A	--			41 U
SD81A	--	--	--	41 U
SD82A	--	--	--	43 U
SD83A	--	--	--	43 U
SD84A	0.020	0.85	0.41	40 U
SD84B	--	--	--	39 U
SD85A	--	--	--	49 U
SD86A	--	--	--	42 U

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations.

Value in bold is the exposure point concentration, which is maximum detected concentration for the chemical.

PCB = Polychlorinated biphenyl.

-- = Not analyzed.

The higher of duplicate samples used; used lower detection limit if both non-detects or detected concentration if one detect and one non-detect.

TABLE 8-19
Exposure Point Concentrations for Floodplain Surface Soil

Location	Parameter (ug/kg)			
	PCB Congener TEQ (Birds)	PCB Congener TEQ (Fish)	PCB Congener TEQ (Humans/Mammals)	Aroclor 1260
Little Brier Creek Reach A & Reach D				
SS117A	--	--	--	1100
SS118A	--	--	--	640
SS119A	--	--	--	48
Brier Creek Reservoir - Middle & Lower				
SS120A	--	--	--	38 U
SS121A	--	--	--	48
SS122A	--	--	--	38 U
Crabtree Creek				
SS130A	--	--	--	39 U
Lake Crabtree - Sector A, B & C				
SS123A				39 UJ
SS124A	2.32E-05	0.00102	0.000456	39 U
SS137A (Dup 124A)	2.66E-05	0.00116	0.000523	39 U
SS125A	--	--	--	37 U
SS126A	--	--	--	39 U
SS127A	--	--	--	38 U
SS128A	--	--	--	41 U
SS129A	--	--	--	38 U
SS131A	--	--	--	39 U
SS132A	--	--	--	55 U
SS133A	--	--	--	44 U
SS134A	--	--	--	47 U
SS 138A (Dup 134A)	--	--	--	44 U
SS135A	--	--	--	41 U
SS136A		--	--	41 U

TEQ = Toxic equivalent quotient, calculated using 1/2 of the detection limit of non-detect concentrations. The exposure point concentration is in bold, and is the maximum concentration within each floodplain area.

PCB = Polychlorinated biphenyl.

-- = Not analyzed.

U = Not detected above detection limit.

J = Estimated value.

The higher of duplicate samples used; used lower detection limit if both non-detects or detected concentration if one detect and one non-detect.

TABLE 8-20
Hazard Quotients for Benthic Invertebrates

Location	Concentration (mg/kg)		Screening Benchmark EPA Region 4 (1995a)	Hazard Quotient	
	Maximum	95% UCL		Maximum	95% UCL
Little Brier Creek and Tributaries					
Dioxins/furans TEQ - fish	9.7E-05	2.2E-05	2.5E-06	3.9E+01	8.6E+00
PCB Congener TEQ - fish	5.3E-03	5.3E-04	2.5E-06	2.1E+03	2.1E+02
D/F & PCB TEQ fish	5.4E-03	6.4E-04	2.5E-06	2.1E+03	2.6E+02
Aroclor 1260	6.2E+01	1.6E+01	3.0E-02	2.1E+03	5.5E+02
Brier Creek Reservoir					
Dioxins/furans TEQ - fish	1.61E-05	--	2.5E-06	6.4E+00	--
PCB Congener TEQ - fish	1.14E-05	--	2.5E-06	4.6E+00	--
D/F & PCB TEQ fish	1.28E-05	--	2.5E-06	5.1E+00	--
Aroclor 1260	3.1E-01	--	3.0E-02	1.0E+01	--
Below Brier Creek Reservoir					
Dioxins/furans TEQ - fish	--	--	2.5E-06	--	--
PCB Congener TEQ - fish	3.7E-06	--	2.5E-06	1.5E+00	--
D/F & PCB TEQ fish	3.7E-06	--	2.5E-06	1.5E+00	--
Aroclor 1260	0.28	--	1.0E+00	2.8E-01	--
Lake Crabtree					
Dioxins/furans TEQ - fish	--	--	2.5E-06	--	--
PCB Congener TEQ - fish	5.6E-05	--	2.5E-06	2.2E+01	--
D/F & PCB TEQ fish	5.6E-05	--	2.5E-06	2.2E+01	--
Aroclor 1260	4.8E-01	--	3.0E-02	1.6E+01	--
Crabtree Creek					
Dioxins/furans TEQ - fish	--	--	2.5E-06	--	--
PCB Congener TEQ - fish	5.6E-06	--	2.5E-06	2.2E+00	--
D/F & PCB TEQ fish	5.6E-06	--	2.5E-06	2.2E+00	--
Aroclor 1260	--	--	3.0E-02	--	--

All concentrations in mg/kg

TEQ = Toxic equivalent quotient

PCB = Polychlorinated biphenyl

D/F = Dioxin/furan

95% UCL = 95 percent upper confidence limit on the mean

TABLE 8-21

Hazard Quotients for Fish and Crayfish

Location	Maximum Whole Body Tissue Concentration	Fish and Aquatic Invertebrate TRV		Hazard quotient	
		NOED	LOED	NOED	LOED
Omnivorous Fish Species					
Little Brier Creek and Tributaries					
Dioxins/furans TEQ - fish	7.1E-06	1.0E-03	4.4E-03	7.1E-03	1.6E-03
PCB Congener TEQ - fish	5.7E-06	1.0E-03	4.4E-03	5.7E-03	1.3E-03
D/F & PCB TEQ fish	1.3E-05	1.0E-03	4.4E-03	1.3E-02	2.9E-03
Aroclor 1260	2.2E+01	2.2E+00	1.4E+01	1.0E+01	1.5E+00
Brier Creek Reservoir					
Dioxins/furans TEQ - fish	--	1.0E-03	4.4E-03	--	--
PCB Congener TEQ - fish	2.8E-06	1.0E-03	4.4E-03	2.8E-03	6.3E-04
D/F & PCB TEQ fish	2.8E-06	1.0E-03	4.4E-03	2.8E-03	6.3E-04
Aroclor 1260	2.4E+00	2.2E+00	1.4E+01	1.1E+00	1.7E-01
Below Brier Creek Reservoir					
Dioxins/furans TEQ - fish	6.7E-07	1.0E-03	4.4E-03	6.7E-04	1.5E-04
PCB Congener TEQ - fish	1.5E-06	1.0E-03	4.4E-03	1.5E-03	3.3E-04
D/F & PCB TEQ fish	2.1E-06	1.0E-03	4.4E-03	2.1E-03	4.8E-04
Aroclor 1260	5.0E-01	2.2E+00	1.4E+01	2.3E-01	3.5E-02
Lake Crabtree					
Dioxins/furans TEQ - fish	--	1.0E-03	4.4E-03	--	--
PCB Congener TEQ - fish	7.9E-07	1.0E-03	4.4E-03	7.9E-04	1.8E-04
D/F & PCB TEQ fish	7.9E-07	1.0E-03	4.4E-03	7.9E-04	1.8E-04
Aroclor 1260	7.1E-01	2.2E+00	1.4E+01	3.3E-01	5.0E-02
Crabtree Creek					
Dioxins/furans TEQ - fish	--	1.0E-03	4.4E-03	--	--
PCB Congener TEQ - fish	3.3E-07	1.0E-03	4.4E-03	3.3E-04	7.4E-05
D/F & PCB TEQ fish	3.3E-07	1.0E-03	4.4E-03	3.3E-04	7.4E-05
Aroclor 1260	3.4E-01	2.2E+00	1.4E+01	1.6E-01	2.4E-02

TABLE 8-21 (con't)
Hazard Quotients for Fish and Crayfish

Location	Maximum Whole Body Tissue Concentration	Fish and Aquatic Invertebrate TRV		Hazard (rodent)	
		NOED	LOED	NOED	LOED
Carnivorous Fish Species					
Little Brier Creek and Tributaries					
Dioxins/furans TEQ - fish	6.0E-06	1.3E-04	2.2E-03	4.8E-02	2.5E-03
PCB Congener TEQ - fish	2.3E-05	1.3E-04	2.2E-03	1.9E-01	1.1E-02
D/F & PCB TEQ fish	2.9E-05	1.3E-04	2.2E-03	2.3E-01	1.4E-02
Aroclor 1260	7.5E+01	1.4E-01	1.1E+00	5.4E+02	6.8E+01
Brier Creek Reservoir					
Dioxins/furans TEQ - fish	6.6E-07	1.3E-04	2.2E-03	5.3E-03	3.1E-04
PCB Congener TEQ - fish	8.0E-06	1.3E-04	2.2E-03	6.4E-02	3.7E-03
D/F & PCB TEQ fish	8.7E-06	1.3E-04	2.2E-03	6.9E-02	4.0E-03
Aroclor 1260	2.5E+00	1.4E-01	1.1E+00	1.8E+01	2.3E+00
Below Brier Creek Reservoir					
Dioxins/furans TEQ - fish	3.9E-07	1.3E-04	2.2E-03	3.1E-03	1.8E-04
PCB Congener TEQ - fish	1.5E-06	1.3E-04	2.2E-03	1.2E-02	6.7E-04
D/F & PCB TEQ fish	1.8E-06	1.3E-04	2.2E-03	1.5E-02	8.5E-04
Aroclor 1260	4.9E-01	1.4E-01	1.1E+00	3.5E+00	4.5E-01
Lake Crabtree					
Dioxins/furans TEQ - fish	3.2E-07	1.3E-04	2.2E-03	2.5E-03	1.5E-04
PCB Congener TEQ - fish	1.5E-06	1.3E-04	2.2E-03	1.2E-02	7.0E-04
D/F & PCB TEQ fish	1.8E-06	1.3E-04	2.2E-03	1.5E-02	8.4E-04
Aroclor 1260	9.0E-01	1.4E-01	1.1E+00	6.4E+00	8.2E-01
Crabtree Creek					
Dioxins/furans TEQ - fish	--	1.3E-04	2.2E-03	--	--
PCB Congener TEQ - fish	3.3E-07	1.3E-04	2.2E-03	2.6E-03	--
D/F & PCB TEQ fish	3.3E-07	1.3E-04	2.2E-03	2.6E-03	--
Aroclor 1260	5.9E-01	1.4E-01	1.1E+00	4.2E+00	5.4E-01

Location	Maximum Whole Body Tissue Concentration	Fish and Aquatic Invertebrate TRV		Hazard Quotient	
		NOED	LOED	NOED	LOED
Aquatic Invertebrate Species					
Little Brier Creek and Tributaries					
Dioxins/furans TEQ - fish	4.6E-06	8.6E-03	--	5.3E-04	--
PCB Congener TEQ - fish	5.1E-06	8.6E-03	--	5.9E-04	--
D/F & PCB TEQ fish	9.6E-06	8.6E-03	--	1.1E-03	--
Aroclor 1260	1.1E+01	4.0E-02	5.8E+00	2.8E+02	1.9E+00
Brier Creek Reservoir					
Dioxins/furans TEQ - fish	--	8.6E-03	--	--	--
PCB Congener TEQ - fish	--	8.6E-03	--	--	--
D/F & PCB TEQ fish	--	8.6E-03	--	--	--
Aroclor 1260	--	4.0E-02	5.8E+00	--	--
Below Brier Creek Reservoir					
Dioxins/furans TEQ - fish	3.2E-07	8.6E-03	--	3.7E-05	--
PCB Congener TEQ - fish	1.4E-06	8.6E-03	--	1.7E-04	--
D/F & PCB TEQ fish	1.7E-06	8.6E-03	--	2.0E-04	--
Aroclor 1260	7.4E-02	4.0E-02	5.8E+00	1.9E+00	1.3E-02
Lake Crabtree					
Dioxins/furans TEQ - fish	--	8.6E-03	--	--	--
PCB Congener TEQ - fish	--	8.6E-03	--	--	--
D/F & PCB TEQ fish	--	8.6E-03	--	--	--
Aroclor 1260	--	4.0E-02	5.8E+00	--	--
Crabtree Creek					
Dioxins/furans TEQ - fish	--	8.6E-03	--	--	--
PCB Congener TEQ - fish	2.8E-07	8.6E-03	--	3.2E-05	--
D/F & PCB TEQ fish	2.8E-07	8.6E-03	--	3.2E-05	--
Aroclor 1260	1.8E-01	4.0E-02	5.8E+00	4.5E+00	3.1E-02

Notes:

All concentrations in mg/kg.

-- = Receptor or contaminant not evaluated.

TEQ = Toxic equivalent quotient

PCB = Polychlorinated biphenyl

TRV = Toxicity reference value

NOED = No observable effect concentration

LOED = Lowest observable effect concentration.

Tissue data for all species collected within the reach are presented. The same species were not found in each reach. See Tables 3-1 through 3-5 for species collected from each reach.

Omnivorous fish species include catfish and bullhead.

Carnivorous fish species include sunfish and bass.

Aquatic invertebrate species is crayfish.

TABLE 8-22

Hazard Quotients for Plants and Other Soil-Dwelling Organisms
Ward Transformer Site
Raleigh, North Carolina
(All concentrations in mg/kg)

Location	Concentration		Soil Benchmarks		Hazard Quotient - Region 4 Screening Level- Other Soil-Dwelling Organisms		Hazard Quotient - Plants	
	Maximum	EPC	EPA Region 4	Plants	Maximum Concentration	EPC	Maximum Concentration	EPC
Banks of Little Brier Creek and Tributaries								
Aroclor 1260	62	30	2.00E-02	4.00E+01	3.1E+03	1.5E+03	1.6E+00	7.5E-01
PCB Congener TEQ (mammal)	1.05E-01	6.26E-02	--	--	--	--	--	--
Dioxin/Furan TEQ (mammal)	9.89E-05	4.71E-05	--	--	--	--	--	--
Dioxin/Furan + PCB TEQ (mammal)	1.05E-01	6.26E-02	--	--	--	--	--	--
Little Brier Creek and Tributaries Floodplain*								
Aroclor 1260	1.1	0.596	2.00E-02	4.00E+01	5.5E+01	3.0E+01	2.8E-02	1.5E-02
Brier Creek Reservoir Floodplain								
Aroclor 1260	0.048		2.00E-02	14.00E+01	2.4E+00	--	1.2E-03	--
Lake Crabtree Floodplain								
Aroclor 1260	ND	ND	2.00E-02	4.00E+01	--	--	--	--
PCB Congener TEQ (mammal)	5.23E-07	--	--	--	--	--	--	--

-- Soil benchmark not available.

* Value presented for EPC is the arithmetic average of three composite samples from this area; remaining EPCs are 95% UCLs.

TABLE 8-24
Hazard Quotients for Banks of Little Brier Creek and Tributaries

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Bank Soil I	Tissue	Surface Water I	Total	Bank Soil I	Tissue	Water	Total
Maximum Substrate Concentration								
<i>Robin</i>								
Aroclor 1260	1.2E+01	8.7E+03	2.0E-03	8.7E+03	1.2E+00	8.7E+02	2.0E-04	8.7E+02
PCB Congener TEQ (bird)	2.8E+02	1.9E+05	--	1.9E+05	2.8E+01	1.9E+04	--	1.9E+04
Dioxin/Furan TEQ (bird)	3.7E-01	2.5E+02	--	2.5E+02	3.7E-02	2.5E+01	--	2.5E+01
Dioxin/Furan + PCB TEQ (bird)	2.8E+02	1.9E+05	--	1.9E+05	2.8E+01	1.9E+04	--	1.9E+04
<i>Deer Mouse</i>								
Aroclor 1260	1.4E+00	4.4E+03	1.2E-03	4.4E+03	2.9E-01	8.8E+02	2.5E-04	8.8E+02
PCB Congener TEQ (mammal)	3.5E+02	1.0E+06	--	1.0E+06	3.5E+01	1.0E+05	--	1.0E+05
Dioxin/Furan TEQ (mammal)	3.3E-01	9.7E+02	--	9.7E+02	3.3E-02	9.7E+01	--	9.7E+01
Dioxin/Furan + PCB TEQ (mammal)	3.5E+02	1.0E+06	--	1.0E+06	3.5E+01	1.0E+05	--	1.0E+05
95% UCL Substrate Concentration								
<i>Robin</i>								
Aroclor 1260	6.0E+00	4.2E+03	2.0E-03	4.2E+03	6.0E-01	4.2E+02	2.0E-04	4.2E+02
PCB Congener TEQ (bird)	7.0E+01	4.7E+04	--	4.7E+04	7.0E+00	4.7E+03	--	4.7E+03
Dioxin/Furan TEQ (bird)	1.8E-01	1.2E+02	--	1.2E+02	1.8E-02	1.2E+01	--	1.2E+01
Dioxin/Furan + PCB TEQ (bird)	7.0E+01	4.7E+04	--	4.7E+04	7.0E+00	4.7E+03	--	4.7E+03
<i>Deer Mouse</i>								
Aroclor 1260	6.9E-01	2.1E+03	1.2E-03	2.1E+03	1.4E-01	4.3E+02	2.5E-04	4.3E+02
PCB Congener TEQ (mammal)	2.1E+02	6.1E+05	--	6.1E+05	2.1E+01	6.1E+04	--	6.1E+04
Dioxin/Furan TEQ (mammal)	1.6E-01	4.6E+02	--	4.6E+02	1.6E-02	4.6E+01	--	4.6E+01
Dioxin/Furan + PCB TEQ (mammal)	2.1E+02	6.1E+05	--	6.1E+05	2.1E+01	6.1E+04	--	6.1E+04

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

95UCL = 95% upper confidence limit on the mean

-- = Exposure medium or contaminant not evaluated for this receptor.

TABLE 8-25

Hazard Quotients for Brier Creek Reservoir and Floodplain

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Soil	Sediment	Tissue	Total	Soil	Sediment	Tissue	Total
<i>Mink</i>								
Aroclor 1260	--	1.1E-03	3.8E+00	3.8E+00		2.3E-04	7.7E-01	7.7E-01 <1
PCB Congener TEQ (mammal)	--	1.2E-01	1.8E+01	1.8E+01	--	1.2E-02	1.8E+00	1.8E+00
Dioxin/Furan TEQ (mammal)	--	8.9E-02	1.6E-01	2.5E-01 <1	--	8.9E-03	1.6E-02	2.5E-02 <1
Dioxin/Furan + PCB TEQ (mammal)	--	1.2E-01	1.8E+01	1.8E+01	--	1.2E-02	1.8E+00	1.8E+00
<i>Heron</i>								
Aroclor 1260	--	1.2E-02	1.0E+00	1.1E+00	--	1.2E-03	1.0E-01	1.1E-01 <1
PCB Congener TEQ (bird)	--	1.1E-01	8.4E-01	9.5E-01 <1	--	1.1E-02	8.4E-02	9.5E-02 <1
Dioxin/Furan TEQ (bird)	--	7.9E-02	1.0E-02	8.9E-02 <1	--	7.9E-03	1.0E-03	8.9E-03 <1
Dioxin/Furan + PCB TEQ (bird)	--	1.1E-01	8.5E-01	9.6E-01 <1	--	1.1E-02	8.5E-02	9.6E-02 <1
<i>Eagle</i>								
Aroclor 1260	--	3.3E-04	1.0E+00	1.0E+00	--	3.3E-05	1.0E-01	1.0E-01 <1
PCB Congener TEQ (bird)	--	3.0E-03	4.6E-01	4.6E-01 <1	--	3.0E-04	4.6E-02	4.6E-02 <1
Dioxin/Furan TEQ (bird)	--	2.2E-03	1.0E-02	1.3E-02 <1	--	2.2E-04	1.0E-03	1.3E-03 <1
Dioxin/Furan + PCB TEQ (bird)	--	3.0E-03	4.7E-01	4.7E-01 <1	--	3.0E-04	4.7E-02	4.7E-02 <1
<i>American robin</i>								
Aroclor 1260	9.6E-03	--	6.8E+00	6.8E+00	9.6E-04	--	6.8E-01	6.8E-01 <1
<i>Deer mouse</i>								
Aroclor 1260	1.1E-03		3.4E+00	3.4E+00	2.2E-04	--	6.8E-01	6.8E-01 <1

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

= Exposure medium or contaminant not evaluated for this receptor.

TABLE 26

Hazard Quotients for Brier Creek (Below Brier Creek Reservoir)

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Sediment	Tissue	Total		Sediment	Tissue	Total	
<i>Mink</i>								
Aroclor 1260	1.0E-03	7.9E-01	7.9E-01	<1	2.1E-04	1.6E-01	1.6E-01	<1
PCB Congener TEQ (mammal)	3.6E-02	6.7E+00	6.8E+00		3.6E-03	6.7E-01	6.8E-01	<1
Dioxin/Furan TEQ (mammal)	--	1.6E-01	1.6E-01	<1	--	1.6E-02	1.6E-02	<1
Dioxin/Furan + PCB TEQ (mammal)	3.6E-02	6.9E+00	6.9E+00		3.6E-03	6.9E-01	6.9E-01	<1
<i>Heron</i>								
Aroclor 1260	1.0E-02	2.4E-01	2.5E-01	<1	1.0E-03	2.4E-02	2.5E-02	<1
PCB Congener TEQ (bird)	7.8E-02	6.7E-01	7.5E-01	<1	7.8E-03	6.7E-02	7.5E-02	<1
Dioxin/Furan TEQ (bird)	--	1.4E-02	1.4E-02	<1	--	1.4E-03	1.4E-03	<1
Dioxin/Furan + PCB TEQ (bird)	7.8E-02	6.9E-01	7.7E-01	<1	7.8E-03	6.9E-02	7.7E-02	<1
<i>Raccoon</i>								
Aroclor 1260	2.6E-01	3.0E-02	2.9E-01	<1	2.2E-03	6.1E-03	8.2E-03	<1
PCB Congener TEQ (mammal)	8.9E-02	3.7E+00	3.8E+00		3.7E-02	3.7E-01	4.1E-01	<1
Dioxin/Furan TEQ (mammal)	--	5.8E-02	5.8E-02	<1	--	5.8E-03	5.8E-03	<1
Dioxin/Furan + PCB TEQ (mammal)	8.8E-02	3.8E+00	3.9E+00		3.7E-02	3.8E-01	4.2E-01	<1

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

= Exposure medium or contaminant not evaluated for this receptor.

TABLE 8-27

Hazard Quotients for Lake Crabtree and Floodplain

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Soil	Sediment	Tissue	Total	Soil	Sediment	Tissue	Total
<i>Mink</i>								
Aroclor 1260	--	1.8E-03	1.2E+00	1.2E+00	--	3.6E-04	2.3E-01	2.3E-01 <1
PCB Congener TEQ (mammal)	--	6.0E-01	4.8E+00	5.4E+00	--	6.0E-02	4.8E-01	5.4E-01 <1
Dioxin/Furan TEQ (mammal)	--	--	7.9E-03	7.9E-03 <1	--	--	7.9E-04	7.9E-04 <1
Dioxin/Furan + PCB TEQ (mammal)	--	6.0E-01	4.8E+00	5.4E+00	--	6.0E-02	4.8E-01	5.4E-01 <1
<i>Heron</i>								
Aroclor 1260	--	1.8E-02	3.7E-01	3.9E-01 <1	--	1.8E-03	3.7E-02	3.9E-02 <1
PCB Congener TEQ (bird)	--	6.5E-01	3.4E-01	9.9E-01 <1	--	6.5E-02	3.4E-02	9.9E-02 <1
Dioxin/Furan TEQ (bird)	--	--	3.9E-03	3.9E-03 <1	--	--	3.9E-04	3.9E-04 <1
Dioxin/Furan + PCB TEQ (bird)	--	6.5E-01	3.4E-01	1.0E+00 <1	--	6.5E-02	3.4E-02	1.0E-01 <1
<i>Eagle</i>								
Aroclor 1260	--	1.6E-04	1.0E-01	1.0E-01 <1	--	1.6E-05	1.0E-02	1.0E-02 <1
PCB Congener TEQ (bird)	--	1.4E-06	1.0E-05	1.2E-05 <1	--	1.4E-07	1.0E-06	1.2E-06 <1
Dioxin/Furan TEQ (bird)	--	--	6.1E-08	6.1E-08 <1	--	--	6.1E-09	6.1E-09 <1
Dioxin/Furan + PCB TEQ (bird)	--	1.4E-06	1.0E-05	1.2E-05 <1	--	1.4E-07	1.0E-06	1.2E-06 <1
<i>American robin</i>								
PCB Congener TEQ (bird)	6.8E-06	--	4.6E-03	4.6E-03 <1	6.8E-07	--	4.6E-04	4.6E-04 <1
<i>Deer mouse</i>								
PCB Congener TEQ (mammal)	1.8E-03	--	5.1E+00	5.1E+00	1.8E-04	--	5.1E-01	5.1E-01 <1

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

= Exposure medium or contaminant not evaluated for this receptor.

TABLE 8-28

Hazard Quotients for Crabtree Creek

COPEC	Hazard Quotient - No Effect				Hazard Quotient - Low Effect			
	Sediment	Tissue	Total		Sediment	Tissue	Total	
<i>Mink</i>								
Aroclor 1260	--	5.8E-01	5.8E-01	<1	--	1.2E-01	1.2E-01	<1
PCB Congener TEQ (mammal)	5.5E-02	1.6E+00	1.6E+00		5.5E-03	1.6E-01	1.6E-01	<1
Dioxin/Furan TEQ (mammal)	--	--	--		--	--	--	
Dioxin/Furan + PCB TEQ (mammal)	5.5E-02	1.6E+00	1.6E+00		5.5E-03	1.6E-01	1.6E-01	<1
<i>Heron</i>								
Aroclor 1260	--	2.2E+00	2.2E+00		--	2.2E-01	2.2E-01	<1
PCB Congener TEQ (bird)	1.2E+00	6.6E-01	1.9E+00		1.2E-01	6.6E-02	1.9E-01	<1
Dioxin/Furan TEQ (bird)	--	--	--		--	--	--	
Dioxin/Furan + PCB TEQ (bird)	1.2E+00	6.6E-01	1.9E+00		1.2E-01	6.6E-02	1.9E-01	<1
<i>Raccoon</i>								
Aroclor 1260	--	7.3E-02	7.3E-02	<1	--	1.5E-02	1.5E-02	<1
PCB Congener TEQ (mammal)	6.0E-01	3.8E-01	9.8E-01	<1	5.7E-02	3.8E-02	9.4E-02	<1
Dioxin/Furan TEQ (mammal)	--	--	--		--	--	--	
Dioxin/Furan + PCB TEQ (mammal)	6.0E-01	3.8E-01	9.8E-01	<1	5.7E-02	3.8E-02	9.4E-02	<1

PCB = polychlorinated biphenyl

TEQ = Toxic equivalent quotient

-- = Exposure medium or contaminant not evaluated for this receptor.

APPENDIX C



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

30 September 2008

Michael F. Easley, Governor
William G. Ross Jr., Secretary

Mr. Luis Flores
Superfund Branch, Waste Management Division
US EPA Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303

SUBJECT: Concurrence with Record of Decision
Ward Transformer Site Operable Unit #1 (Downstream Reaches)
Raleigh, Wake County

Dear Mr. Flores:

The State of North Carolina by and through its Department of Environment and Natural Resources, Division of Waste Management (herein after referred to as "the state"), reviewed the Record of Decision (ROD) received by the Division on 29 September 2008 for the Ward Transformer Site Operable Unit #1 (Downstream Reaches) and concurs with the selected remedy, subject to the following conditions:

1. State concurrence on the ROD for this site is based solely on the information contained in the ROD received by the State on 29 September 2008. Should the State receive new or additional information which significantly affects the conclusions or amended remedy contained in the ROD, it may modify or withdraw this concurrence with written notice to EPA Region IV.
2. State concurrence on this ROD in no way binds the State to concur in future decisions or commits the State to participate, financially or otherwise, in the clean up of the site. The State reserves the right to review, overview comment, and make independent assessment of all future work relating to this site.
3. If, after remediation is complete, the total residual risk level exceeds 10^{-6} , the State may require deed recordation/restriction to document the presence of residual contamination and possibly limit future use of the property as specified in NCGS 130A-310.8

The State of North Carolina appreciates the opportunity to comment on the ROD and looks forward to working with EPA on the remedy for the subject site. If you have any questions or comments, please call Mr. Nile Testerman at 919 508-8482.

Sincerely,

Dexter R. Matthews, Director
Division of Waste Management

cc: Jack Butler, Chief, NC Superfund Section
David Lown, NC Superfund
Nile Testerman, NC Superfund

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RESPONSIVENESS SUMMARY
WARD TRANSFORMER SUPERFUND SITE
Operable Unit 1

Raleigh, Wake County
North Carolina



U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA, GEORGIA
September 2008

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I. INTRODUCTION

This Responsiveness Summary summarizes the written comments received by USEPA on the Proposed Plan for Operable Unit 1 (OU1) of the Ward Transformer Site, during the public comment period, and responses to those comments. This Responsiveness Summary also includes the transcript from the August 14, 2007, public hearing.

The RI/FS report and Proposed Plan for OU1 were made available to the public in August 2007. These and other documents can be found in the Administrative Record file and the information repository maintain at the USEPA Docket Room in Region 4 and at the North Regional Public Library in Raleigh, North Carolina. The notice of availability of these two documents was published in the Durham Herald on August 6, 2007, and the Raleigh News and Observer on August 8, 2007. A public comment period was held from August 6, 2007 to September 4, 2007. An extension to the public comment period was requested. As a result, it was extended to October 4, 2007. A public meeting was held on August 14, 2007 to present the proposed plan for OU1 to a broader community audience than those that had already been involved at the Site. This meeting was attended by approximately 40 citizens.

This Responsiveness Summary has three sections: Section I summarizes and responds to common concerns expressed by multiple commenters; Section II presents and responds to certain specific and more scientifically-based comments; and Section III includes a transcript of the August 14, 2007 public hearing.

II. COMMON CONCERNS EXPRESSED BY MULTIPLE COMMENTERS

EPA received letters and emails some supporting and others expressing concerns regarding the Preferred Alternative. The following is a summary of the common concerns received by multiple commenters and USEPA response to those concerns.

1. Additional floodplain soil samples area needed along Reaches B, C, D, and Lower Brier Creek.

EPA Response: *EPA agrees that additional floodplain soil samples are needed. The preferred alternative (Alternative 4) was modified to require floodplain soil samples to be collected along Reaches B, C, D and lower Brier Creek as part of the pre-excavation sampling program. Floodplain soil from the above-mentioned areas with PCB concentrations above 1 mg/kg will be excavated and properly disposed off-site. Sections 13 and 15 of the ROD document these additional requirements.*

2. Additional sediment samples from Lake Crabtree and Brier Creek Reservoir need to be collected.

EPA Response: *EPA agrees that additional sediment samples from Lake Crabtree and Brier Creek Reservoir need to be collected. Additional samples will be collected from these areas as part of the MNR component of the Selected Remedy as documented in Section 13 of the ROD.*

3. Evaluate impact of the any remedial activities on any sensitive or endangered species such as mussels.

EPA Response: *EPA agrees with the comment. The Selected Remedy requires that an endangered mussel evaluation be conducted prior to excavation as documented in Section 13 of the ROD.*

4. Data should be provided to citizens of Wake county and downstream communities.

EPA Response: *EPA agrees with the comment. All data and reports will be made available to citizens and stakeholders. Site documents will be available at the Site Information Repository located at the North Raleigh Public Library.*

5. EPA is only relying on Monitor Natural Recovery (MNR).

EPA Response: *The Selected Remedy does not rely on MNR only. The Selected Remedy includes a component that requires excavation of contaminated soil and sediments with PCB concentrations above 1 mg/kg along Reaches B, C, D, and Lower Brier Creek. In addition, the Selected Remedy takes into consideration the removal activities being conducted at the Ward Transformer facility, at Reach A and at some other immediate areas. Under the removal action more than 150,000 tons of PCB contaminated soil and sediment will be cleaned up. Section 13 of the ROD provides a complete description of all the components of the Selected Remedy.*

6. Direct contact with PCBs from the bottom of the Lake while conducting boating/sailing activities.

EPA Response: *PCB concentrations in the sediments from Lake Crabtree are very low. Most sediment samples collected from the Lake show non-detectable levels of PCBs. The highest detectable PCB concentration from a single sample point from Lake Crabtree is 0.48 mg/kg. Sediment with PCB levels this low; do not pose unacceptable risk due to exposure while conducting boating/sailing activities at Lake Crabtree.*

7. Make sure that Ward Transformer and the appropriate parties are held accountable for cleanup costs.

EPA Response: *EPA has been working towards identifying the Potentially Responsible Parties (PRPs) for this Site. Once the Record of Decision (ROD) is issued, these PRPs will be noticed to participate and fund the clean up actions for this Operable Unit. EPA will negotiate the terms of a consent decree with the PRPs. Successful negotiations will end with a signed consent decree between the parties and the PRPs agreeing to fund the clean up actions. If negotiations fail, EPA will conduct the clean up using federal funds and pursue reimbursement under a cost recovery action suit.*

III. SPECIFIC AND MORE SCIENTIFICALLY-BASED COMMENTS

A. Responses to Comments submitted by Environmental Stewardship Concepts on Behalf of the Upper Neuse River Keeper, Neuse River Foundation

Comments on the Proposed Plan

8. The Proposed Plan inevitably shares many of the same weaknesses as the Remedial Investigation (RI) and Feasibility Study (FS). Sampling associated with the Remedial Investigation (RI) did not adequately characterize deeper sediments or floodplain soils in upper Brier Creek. Inadequate sampling has failed to accurately describe the linkage between PCB contamination in sediments in Brier Creek Reservoir and Crabtree Creek to the levels recorded in fish tissues. "Hotspots" of contamination are likely the source of PCB's, but sediment sampling has been cursory and has not been complete enough to locate any hot spots. The strength of the Plan's proposed alternatives suffered as a result of the underestimation of risks in the Remedial Investigation. The Plan's focus on alternatives involving Monitored Natural Recovery (MNR) is primarily the result of a combination of flawed assumptions in the Feasibility Study.

EPA Response: The sampling conducted during the Remedial Investigation (RI) was sufficient to identify the environmental problems associated with the release of PCBs downstream from the Ward Transformer facility. Additional sampling, which is specified in the Selected Remedy, will be required to provide the current and more detailed delineation of the PCBs contained in downstream sediment and floodplain soils to support remedial actions. EPA agrees with the observation that additional floodplain soil characterization is needed. Additional floodplain soil characterization will be conducted prior to remedial actions in Reaches B, C and D and Lower Brier Creek.

Sediment sampling was conducted to sampler refusal in Reaches B, C and D plus Brier Creek Reservoir and Lake Crabtree. The depth of sampler refusal was considered the bottom of the sediment column, which is standard practice in the environmental industry.

The link between PCB concentrations in sediments and fish tissue has been established in the technical literature and is supported by EPA. Additional sampling is not required to establish this link in Lake Crabtree and Brier Creek Reservoir. The Feasibility Study (FS) presented site-specific Biota Sediment Accumulation Factor (BSAF) calculations to help quantify this relationship.

Local area of Reaches B, C and D may contain higher concentrations of contaminants ("hot spots"), but these "hot spots" will be identified during sampling proposed in the pre-excavation sampling program. Contamination "hot spots" are unlikely in the lake and reservoir, due to the mechanisms that determine the spread of fine sediments (containing sorbed PCBs) across the water bodies. Two areas where higher contaminant concentrations might be anticipated are the locations where the creeks empty into the reservoir and lake. Sediment samples collected in these areas showed slightly higher PCB concentrations, but not concentrations which would be considered "hot spots." Given that the site-specific BSAF values are consistent with those developed for other PCB sites and that fish integrate

exposure throughout their respective home ranges, "hot spots" are not expected to be present in the two reservoirs. Additional sampling has been proposed for the lake and reservoir as part of the MNR component of the Selected Remedy. This additional sampling will help verify the distribution of PCBs across Lake Crabtree and Brier Creek Reservoir.

9. The Feasibility Study inaccurately concluded that the decrease in PCB concentrations further away from the Ward Transformer site are the result of a natural "recovery," when it is more a function of the persistence of PCBs and the time sediments have had to travel downstream. The final factor skewing the plan towards Monitored Natural Recovery (MNR) is the assumption used in the Feasibility Study that actions protective of human health would also protect wildlife. This assumption is not the case as the Monitored Natural Recovery (MNR) alternative leaves contamination at current levels in some areas that is high enough to affect wildlife, and institutional controls such as fish consumption advisories do nothing to lower PCB concentrations in fish. As noted in the Feasibility Study and below in our comments on the same document, Monitored Natural Recovery (MNR) has a mixed track record at best and should be dropped as an alternative for areas with PCB's levels above 0.5 ppm. Several species of fish and mammals are known to be more sensitive to PCBs than are humans, and the cleanup needs to protect these species as well.

EPA Response: EPA fully understands the persistence of PCBs in the environment and knows the historical timeline of PCB use at the Ward Transformer facility. PCBs in sediment have had ample time to travel downstream to the Neuse River. Time is not a primary factor determining PCB distribution at this site. The current distribution of PCBs is primarily related to the erosional and depositional processes at work on the sediment in the Crabtree Creek watershed. The persistence of PCBs in the environment was assumed when the preferred remedial alternative was selected.

One of the remedial goals for the project is to reduce PCB concentrations in aquatic biota (primarily fish) to levels that are safe for human consumption. Achievement of this goal will also help protect sensitive fish, birds, and mammals.

EPA proposed Monitored Natural Recovery (MNR) for Brier Creek Reservoir, Lake Crabtree and the lower portion of Crabtree Creek. No sediment samples collected from these three water bodies has exceeded 0.5 ppm for total PCBs. MNR is a viable alternative for these three water bodies, based on the criteria presented in the comment.

10. The plan's failure to address floodplain soils is also a major flaw. These soils act as both sources and sinks for PCBs in aquatic systems. Severe weather and associated flash flooding actively transport contaminated sediments from flood banks downstream. Any gains made from removing contaminated sediments from within the stream itself will be lost over time as PCBs slowly migrate from floodplain soils back into stream sediments. The proposed removal actions in reaches B, C, and D (Brier Creek and its unnamed tributary) should be expanded to include contaminated floodplain soils.

EPA Response: EPA agrees that floodplain soils in Reaches B, C and D need to be addressed to ensure that all potential sources of PCB contamination have been remediated

along the creeks downstream of the Ward Transformer facility. Additional sampling associated with the Remedial Design and the pre-excavation sampling program component of the Selected Remedy will be conducted. Floodplain soil will be cleaned up to meet the 1 mg/kg remedial goal for PCBs. Sections 13 and 15 document the requirement for floodplain soil sampling and remediation.

11. It is also important to include discussions of remedial actions at the Ward Site itself (OU0) when considering contamination farther downstream. The contamination in downstream waters below the Ward Site (OU1) is the direct result of PCB runoff from the original Ward Transformer site. The effectiveness of the cleanup of the Ward Site itself will have direct implications on the success of any efforts in Brier Creek Reservoir, Crabtree Lake and other waters. This part of the cleanup represents a critical element of source control for Brier Creek Reservoir and Crabtree Lake (OU1) and cannot be ignored.

EPA Response: EPA agrees that cleanup of the Ward facility itself and all other areas being address under the Time-Critical Removal Action are critical in controlling the primary source of PCBs to the Crabtree Creek watershed. EPA is coordinating all Site response actions to ensure success.

12. Recent publications (Lehmann 2006 and Lehmann et al., 2007) present alarming results of bioassays on clams exposed to low levels of PCB's or to waters in the Crabtree/Brier Creek watershed system. Lehmann and co-workers performed a series of biological assays on Asiatic clams as test animals for the water quality of Brier Creek Reservoir. One series of assays involved placing clams in bags into the creeks and sampling them after 21 days. The lab phase of the work involved exposing clams to three concentrations of PCB's in controlled conditions. In both experiments, the clams suffered damage at the cellular and molecular level. The major impact on the clams was reproductive failure because the gonads were damaged by the PCB's. Clams exposed to water without PCB's, or in the reference creek not downstream from the Ward site, showed no such responses.

The remarkable result was that the field assay gave fairly clear results in terms of damage to the clams, but little variation from upstream to downstream, as occurred in the lab experiment with increasing concentrations of PCB's. The damage caused by PCB's in the lab mimicked the results observed in the field, despite the obvious inability to control the field conditions. Additionally, estimated water concentrations in the field (0.05 – 0.18 ppt) were consistent with those measured in the Remedial Investigation (RI), but were lower than the levels to which clams were exposed in the lab (1, 10 100 ppb).

The significance of the clam bioassays is that current conditions are causing biological impairment in the downstream segments of the Brier Creek system, even where sediment and water concentrations are less than action levels. Clams, as filter feeders that live in the sediment, are exposed to both dissolved PCBs and PCBs bound to sediment that is suspended or on the immediate surface of the bottom. These waters and sediments as now sufficiently toxic to impair the reproductive system of the test clams and surely any resident clams.

These results also provide cause for concern over any rare and endangered freshwater bivalves (mussels) that may have occurred in the Brier Creek system or that may be introduced as immature mussels. Under present conditions, one can expect such mussels to die in the Brier Creek system.

Coupled with the elevated fish tissue PCB levels, the clam reproductive impairment data indicate the necessity of cleaning up the PCB sources in the Brier Creek system. If the present results are an accurate and complete characterization of the PCB contamination, then the seemingly low levels in Brier Creek Reservoir and downstream waters are far more harmful than assumed in the Remedial Investigation and Ecological Risk Assessment. On the other hand, the downstream waters may not be accurately and completely characterized and higher levels of PCBs in sediments are yet to be identified and these sediments are the source of the toxicity to clams and PCBs in fish.

The clam bioassay investigations by Lehmann (2006) and Lehmann et al. (2007) provide compelling evidence that the Brier Creek system contains PCBs in concentrations that impair the animals living there. The source investigation and cleanup need to thoroughly delineate the PCB levels throughout Brier Creek Reservoir and Crabtree Lake and in surrounding areas.

EPA Response: The published results of these clam bioassay investigations are recent. EPA will review the results to determine the relevance of the findings to the Ward Transformer Site. It should be noted that the Asiatic clam is present in abundance in the Brier Creek system based on visual observations during fish and crayfish collections performed during the Remedial Investigation sampling. While no macrobenthic invertebrate community surveys or mollusk studies were conducted, sufficient quantities of Asiatic clams are present to support foraging by raccoons based on the shell piles observed along the stream banks and the presence of shells as a component of the stream substrate. Consequently, reproductive impairment either may not be occurring in wild specimens or is not sufficient to result in their elimination from the benthic macroinvertebrate community. In addition, it is not clear whether Asiatic clams are a suitable surrogate for assessing potential effects on native macrobenthic invertebrates (including native mussel populations, if present).

Comments on the Remedial Investigation

General Issues

13. The Remedial Investigation (RI) does not give any soil sampling data for the Ward Transformer Site itself (OU0). This omission is curious because contamination in these areas have a direct effect on the contaminated tributaries and water bodies draining into the Neuse River Tributaries (OU1). The two problems are inseparable and cannot be discussed without mentioning the other. The great concern is that remedial options for each site will be developed in a vacuum.

EPA Response: The results of the soil sampling data for the Ward Transformer site are presented in separate reports, as is typical when a site is divided into different operable units. These results were utilized when preparing the OU-1 RI/FS Reports and these results

are available in the local document repository for the site located in the North Raleigh Public Library.

14. While not directly related to OU1, the RI notes frequently in its background discussions that after 1979 only transformers with lower concentrations (< 50 ppm) were processed at the site. These transformers still contained PCBs, and plans at OU0 should be reviewed to make sure that the assumption that the reconditioning of these transformers carried no risk. Contamination from PCB oil at a level of 50 ppm can easily result in contaminated soils with PCB levels well in excess of remedial targets, and even near 50 PPM, therefore the fact that PCB's were at 45 ppm in the processed equipment is no assurance that contamination is below action levels. Indeed, 50 ppm PCB is a serious contamination problem. Please see the attachment "TEQ Methodology" for a more complete explanation of how risks from PCBs and dioxins are evaluated

EPA Response: EPA agrees that transformers containing dielectric fluids with less than 50 ppm of PCBs still contain significant quantities of PCBs. However, transformers containing fluids with more than 50 ppm of PCBs obviously pose a greater risk if the fluids are released to the environment. Some common PCB-containing dielectric fluids used in transformers contain 60% PCBs by volume. Risk was characterized for OU-0 using soil data that reflected past releases from all PCB-containing materials at the Ward Transformer Site. Consequently, the ultimate sources of contamination, whether greater than or less than 50 ppm PCBs, have little relevance to the current or post-remediation risk.

Sampling

15. While the site has more fish tissue data than a number of other sites we have worked on, there is a dearth of data on soils, and sediment composition in Reach B (Little Brier Creek). A total of 20 soil samples were taken over the entire study area, hardly enough to characterize the entire floodplain. That is a mere 5 samples per reach, and most were focused on human health endpoints around Crabtree Lake and to identify continuing sources to the watershed. This is hardly enough to characterize contamination in floodplain soils. Obtaining more complete data on these soils is critical to controlling PCB contamination in the Neuse River. Floodplain soils act as both sources and sinks for PCB contaminated sediments in waterways. The RI contains no real discussion of major weather events and how they may affect contamination at the site, and this is reflected in the low number of samples taken from floodplain soils. Small streams like the unnamed tributaries to Brier and Crabtree Creeks as well as Brier and Crabtree Creeks themselves are prone to flash flooding. These floods can bring PCB and dioxin contaminated sediments far from established stream banks.

EPA Response: Additional floodplain soil samples will be collected as part of the pre-remediation sampling program. See response to comment number 10.

Climate, major storm events, and flash flooding are all discussed in the RI Report (Sections 1.4.1, 1.4.2 and 4.5) along with their significance relative to PCB migration downstream of the Ward Transformer facility.

16. Stream sediments are also insufficiently characterized. Only four sample locations examined sediments greater than 24 inches beneath the surface. The highest levels of contamination in stream sediments will correspond to peak loadings, considering the delay between spill, introduction into the waters and transport down the creek. The deepest sediments are not likely to be as contaminated as those on the surface, but it is important to characterize them in order define the depth of maximum contamination, the maximum depth of contamination and to better evaluate remedial options. Even low levels of contamination at these depths could affect dredging depths or other actions.

EPA Response: *Sediment sampling was conducted to sampler refusal in Reaches B, C and D plus Brier Creek Reservoir and Lake Crabtree. The depth of sampler refusal was considered the bottom of the sediment column, which is standard practice in the environmental industry.*

17. As noted above, there are an adequate number of fish tissue samples to characterize the site. However, the RI notes that catfish had their skins removed before they were analyzed. The reason for this is not stated. Wildlife that consume catfish and many fishermen do not remove these tissues before eating the fish, so it is unacceptable to evaluate whole body concentrations for the purposes of risk assessments without them. Other fish samples appear to have been handled properly.

EPA Response: *Catfish skins are extremely tough and are traditionally removed by recreational and commercial fisherman prior to consumption. It is standard practice in fish tissue assessments to skin scaleless fish (catfish) prior to filleting. Skins were removed only from those catfish samples collected for evaluating human risk. After removing the skin from the catfish specimens, filets were obtained including the lipid-rich belly flap portion for subsequent analysis. Whole body fish samples collected for evaluating ecological risk were submitted whole (skin-on) for analysis. Consequently, the fish sample preparation procedures that were employed were appropriate for evaluating human health and ecological risk and are not expected to result in low biased estimates.*

18. The Mayor of Raleigh created a scientific panel to evaluate the adequacy of sampling associated with the cleanup of the Ward Transformer site. Many of the sites recommended by the panel were not included in the RI. No explanation for not taking these samples was given in the report. EPA needs to address why they did not include these in the investigation.

EPA Response: *EPA conducted a community stakeholder meeting which included Task Force members, City, County and State officials, as well as interested community members among others, to put together a sampling plan designed to fill any data gaps and address any other community concern regarding potential exposure and nature and extent of contamination. Input was received regarding the number of additional samples, their locations and depths, including floodplain soil samples from recreational areas in the vicinity of Lake Crabtree, and surface and subsurface sediment concentrations in Lake Crabtree and Brier Creek Reservoir. After the meeting, EPA prepared a draft Sampling Plan describing the proposed sampling activities and sent it out for further review and input*

from the group prior to finalizing the plan. The resulting data from the sampling is contained in the Remedial Investigation Report.

Human Health Risk Assessment

19. After reviewing the Remedial Investigation (RI) portion of the document, the most disconcerting problem was not with the document, but with changes or specific rules proposed by the regulatory agencies. In particular, the soil screening values of two toxic metals (arsenic and lead) were set dangerously high at the request of NCDENR or EPA Region 4. The residential screening value for lead was set to 400 mg/kg. This value is almost twice that used in many superfund cleanups around the country. Lead is highly toxic with no lower threshold for adverse effects, particularly in children. In other words, there is no "safe" dose of lead, and any dose will result in measurable health effects (see CDC website).

After the initial draft of the RI was released, EPA Region 4 sent out a bulletin setting a PRG based on noncancer-based endpoints. The resulting chronic reference dose for children was 20 mg/kg and 160 mg/kg for adults. The 20 mg/kg concentration can be considered dangerous to adults based on risks associated with cancer, and would be highly toxic for the stated endpoint of a child's health. It is highly disconcerting that regulatory agencies would exert their influence to establish such unprotective screening levels, particularly since the result effectively prevents lead and arsenic from becoming COPCs in future investigations.

EPA Response: The reported maximum lead level in soils or sediments of the entire site was 25 mg/kg. This is far less than 200 to 400 mg/kg, and in fact is in the background range. There is no valid reason to clean up lead.

The COPC screening level used for arsenic in the human health risk assessment was 0.39 mg/kg, which is based on a residential soil cancer risk of 1E-06 (not the PRGs recommended for cleanup in the EPA Region 4 Bulletin). In this risk assessment, arsenic was selected as a COPC. Cancer risks and hazard quotients were calculated based on the conservative procedures recommended in national EPA risk assessment guidance (RAGS and related guidance documents). Arsenic cancer risks and hazard quotients in all scenarios did not exceed the trigger levels of concern for arsenic cleanup (the highest arsenic risk was 3.8E-07 and the highest arsenic hazard quotient was less than 0.01). The reason that the EPA Region 4 Technical Bulletin was cited in the Uncertainty Analysis was to determine if the calculated risk assessment results and detected soil/sediment levels in the risk assessment were consistent with cleanup policy in EPA Region 4. The PRGs that are discussed by EPA Region 4 and NCDENR (i.e., 20 mg/kg and 160 mg/kg) are not screening levels, but rather are cleanup levels. Note that the maximum arsenic concentration detected in soils or sediments at any location was 5.0 mg/kg. These values are significantly less than the 20 mg/kg EPA Region 4 PRG recommended for children (the most conservative cleanup value), and are in fact well within reported background levels.

20. The Baseline Human Health Risk Assessment (BHHRA) fails to examine an important and likely scenario: intrusive operations into the soil by construction workers in the future in the area immediately downstream from the Ward Site, Reach A. This area, Reach A, is the most contaminated Reach examined by the BHHRA, and is directly adjacent to the Ward

Transformer Site and the Ward stormwater treatment outfall. Given the pace and extent of residential development in the area, and the demand for open or green space in residential areas, the plan must envision residential use of all areas covered by the Proposed Plan.

EPA Response: *Reach A is not part of OU-I, however, the ongoing removal action will remove all Reach A sediments to levels below 1 ppm. Therefore, future construction workers will not be exposed to the levels of contamination that exist today at the Ward Transformer facility and Reach A.*

21. The report erroneously concludes that there is no risk in many of the scenarios outlined in the BHHRA. This error occurs primarily because the BHHRA uses a less protective screening value of E-04 (1 in 10,000) instead of the more appropriate E-06 (1 in 1,000,000). For many of the Chemicals of Potential Concern (COPCs), particularly PCBs and dioxins, additional health effects are routinely found at lower and lower doses. The 1 in 1,000,000 screening level was designed to provide a margin of safety for these types of pollutants. The fact that the proposed Superfund plan is based around the higher risk threshold should call into question the effectiveness of the overall plan.

EPA Response: *The conservative and health protective screening cancer risk level of 1E-06 level was used to select COPCs (not a screening level of 1E-04 as stated in the comment). The 1E-04 risk level discussed in the risk assessment relates to the risk level of concern that triggers remediation of a site. Note that it was never stated in the risk assessment that there was "no risk" from any chemical. Cancer risks may have been "insignificant" with respect to regulatory risk levels set for cleanup action.*

Ecological Risk Assessment

22. The most significant problem of the Baseline Ecological Risk Assessment (BERA) is that the focus is on PCBs, while metals and other toxic compounds are completely ignored. Other compounds weren't even screened despite the sensitivity of wildlife to many of the pollutants present such as aluminum. While PCBs and dioxins are by far the most toxic compounds released by Ward Transformer, they are not the only source of risk to wildlife. The omission of these other contaminants had a profound effect on risk estimates for wildlife.

EPA Response: *Not all contaminants warrant equal attention with regard to risk. The site managers have targeted the investigation of OU1 to the most relevant concerns. Thus, the scope of the BERA was restricted to evaluate impacts of site-related contaminants (i.e., PCB and dioxin-like congeners) on off-site surface waters, from the Ward Transformer's facility's NPDES outfall to the unnamed tributary to Little Brier Creek (Reaches A, B, and C), Little Brier Creek proper (Reach D), Brier Creek Reservoir, Brier Creek, Lake Crabtree, upper and lower Crabtree Creek, and the Neuse River. Please note that aluminum toxicity is associated with soluble aluminum. Aluminum is identified as a COPC only at sites where the soil pH is less than 5.5 (EPA, 2003. Ecological Soil Screening Level for Aluminum, OSWER Directive 9285.7-60). Low pH levels were not found at this site.*

23. The recent results of clam bioassays by Lehmann (2006) and Lehmann et al. (2007) indicate that current conditions cause reproductive impairment to at least some aquatic species. These

results were apparently not included in the ecological risk assessment, thereby omitting important toxicological information on risks to aquatic animals.

EPA Response: *The documents cited were not available during the planning stages of the BERA and, consequently, are not included. The extent of impairment to the Asiatic clam (Corbicula fluminea) populations in the Crabtree Creek watershed associated with PCB contamination is not known at present. During RI fish sampling efforts, Corbicula shells were observed to be a significant component of the substrate in some areas and shell middens from raccoon foraging were also present. While no quantitative sampling to characterize the macrobenthic invertebrate communities relative to control streams was performed in the RI, the observations indicate that there are viable populations of this species in affected reaches. The extent to which the non-native and invasive Corbicula clam is a good surrogate for evaluating potential impacts to native mollusk species, which are mussels rather than clams, is uncertain.*

24. In addition, risks to wildlife are significantly underestimated based on the way that Toxicity Reference Values (TRVs) were calculated. No safety factors for increased species sensitivity were incorporated into these calculations when the species used in the laboratory were different than the target wildlife species. The report attempts to dismiss the significance of safety factors by erroneously claiming that laboratory species tend to be more sensitive than wildlife species. Such a generalization is not true, particularly for avian receptors. Bald eagles are certainly more sensitive to PCBs than pheasants or chickens. Among mammals, mink are among the most sensitive and are not often used in lab tests.

EPA Response: *Allometric modeling from Sample and Arenal (1999) was used for interspecies extrapolations of the TRVs (i.e., when the test species is different from the wildlife or target receptor species). TRVs are not available for eagles due to their special status; thus, a surrogate species is used for this receptor. TRVs for mink were used in the BERA. Risk to sensitive species is considered by evaluating risks using a no-effect TRV.*

25. The report admittedly underestimates risks from PCBs to raccoons and mink by ignoring some pathways such as oysters and mussels. A study was originally planned to characterize mussel tissues but was cancelled. Given the amount of sediment that bivalves take up, it is likely that they are a significant pathway for PCB uptake to their predators. It is encouraging to see the RI openly admit this flaw in their design, but unfortunately these omissions simply compound the flaws noted above.

EPA Response: *The BERA used the fish wholebody tissue concentrations to evaluate risk to mink and crayfish whole body tissue concentrations to evaluate risk to raccoons. The uncertainty analysis discusses that because tissue concentrations of all prey species consumed by the raccoon and mink were not characterized, it is not known whether dietary exposure results in lower or higher risks than those based on fish and crayfish ingestion. Comparisons of crayfish concentration data with fish tissue concentration data from the sampling reaches where both were collected indicated that fish tissue concentrations were higher than crayfish tissue. Thus, it is likely that fish tissue concentrations would be*

higher than mollusk concentrations, and the resulting dietary exposure may over-estimate risk.

While there may be mussels in the watershed, oysters would not occur in this watershed prior to estuarine conditions near the mouth of the Neuse River.

26. Despite the fact that Lake Crabtree currently has fish advisories in place based on the concentration of PCBs and dioxins found in fish tissues, the BERA found no risks to fish and crayfish at the Lowest Observed Effect Dose (LOED). Besides the obvious problem with combining toxicity data for two species of completely different phylogenetic groups, this finding contradicts all available evidence. The body burdens reported in the RI could be high enough to cause reproductive problems in sensitive fish and developmental problems in fish fry (Rice et al 2003). Both of these endpoints are critical to the ongoing health and survival of fish populations, and neither appears to have been considered.

EPA Response: To evaluate the risks to fish and crayfish, tissue residues were compared to tissue residues presented in the USACE/EPA (2004) Environmental Residue-Effects Database (ERED), which is a compilation of data, taken from the literature, where biological effects (e.g., reduced survival, growth, etc.) and tissue contaminant concentrations were simultaneously measured in the same organism. This database was searched for PCB and dioxin effects on fish and aquatic invertebrates, focusing on effects concentrations in whole body samples and focusing on effects on reproduction, growth, and survival. A NOED and a LOED was selected for each receptor group (i.e., omnivorous fish, carnivorous fish, and aquatic invertebrates). The Rice et al 2003 study was not listed in the ERED database.

Also of note is that fish communities in the reaches sampled including the reservoirs do not appear to reflect impacts associated with contaminant toxicity. While fish sampling in the Remedial Investigation targeted specific fish species for chemical analyses, presence of additional non-target species indicates that the stream sections and the reservoirs support reasonably diverse communities and adequate abundance. Few DELTs (deformities, erosion, lesions or tumors) were observed in fish prepared for analyses. The principal threat to the fish community appears to be rapid commercial development in the Crabtree Creek watershed and the attendant changes to the hydrology. Flashy conditions have lead to moderate to heavy bank erosion and the resultant habitat loss or impairment, higher turbidity, and siltation. These are significant stressors to fish and macrobenthic invertebrate communities.

27. In addition to the above, there are a number of other issues with the BERA: Bald eagles were not examined in all reaches, a gap in crayfish sampling resulted in the omission of risk assessments in one reach, the use of maximum detected values when 95% upper confidence limits were exceeded, and the assumption that mink and bald eagles do not accidentally ingest soils or sediments. All of the above issues, though small in comparison to others, result in the underestimation of risks to wildlife. Any one of these issues could potentially be enough to make the difference between a target species exceeding acceptable risk levels. Serious flaws

such as these and others noted above represent serious issues that should be considered when determining the acceptability of the proposed Superfund plan.

EPA Response: *Bald eagles were evaluated as a piscivorous avian receptor of concern in reaches providing the appropriate foraging habitat. Because bald eagles are unlikely to forage in stream reaches with closed canopies, that habitat was evaluated using the great blue heron as the piscivorous avian receptor.*

No crayfish samples were collected from Brier Creek Reservoir or Lake Crabtree, so raccoons as a target receptor group that ingests aquatic invertebrates were not evaluated. Rather, the primary mammalian receptor of interest for the open waters downstream of the Site was the mink. Comparisons of crayfish concentration data with fish tissue concentration data from the sampling reaches where both were collected indicated that fish tissue concentrations were higher than crayfish tissue. Consequently, evaluating risks to a fish-consuming mammal (i.e., mink) would likely result in over-estimated risk to a crayfish-consuming mammal (i.e., raccoon)..

The use of the maximum concentration as the exposure point concentration for data sets where the 95% UCL is greater than the maximum is a common convention for small data sets. The 95% UCL on the mean is used in risk assessment as the representative average concentration within an exposure area. It is inappropriate to use a statistical estimate of the average concentration that is greater than the maximum concentration in a dataset.

Incidental sediment ingestion rates for mink and bald eagles are negligible. One percent of the dry tissue ingestion rate was assumed in calculating contaminant intake for these species.

Comments on the Feasibility Study

28. The Feasibility Study (FS) is substantially lacking compared to the Remedial Investigation (RI). Some of these shortcomings are a direct result of inaccuracies in both the ecological and human health risk assessments. However, these flaws are insignificant compared to one supremely flawed assumption in the FS regarding Reach A, just downstream from the Ward Site.

Reach A is defined as the unnamed tributary to Brier Creek directly adjacent to the Ward Transformer property. This Reach contains the highest concentrations of PCBs of any of the water bodies in Operable Unit 1 (OU1). Though this Reach was investigated under the RI for OU1, remedial options for this area will be selected and performed under the cleanup for OU0, the Ward Transformer property itself. Though odd, there is nothing wrong with this approach in practice if handled properly. However, one passage in Section 4.1.1 indicates that the cleanup of this Reach is being approached in a manner that is not consistent with the protection of downstream locations:

“The drainage area around the Ward Transformer property is approximately 120 acres, and Reach A is a tiny tributary (2 feet wide and less than 1 foot deep) to Little Brier Creek. As a

result, the contaminated sediment loading from soil and sediment erosion around the Ward Transformer Site is relatively small compared to the uncontaminated sediment loading from other segments of the Little Brier Creek watershed (5200 acres) and downstream watersheds (e.g., Brier Creek). The practical result of this mixing of relatively small amounts of contaminated sediments with larger amounts of uncontaminated sediments is that the PCB contamination from Ward Transformer is diluted by these "clean" sediments. This form of natural recovery is occurring, as evidenced by the drop in PCB concentrations in downstream sediments as each new stream with uncontaminated sediments empties into Little Brier Creek and Crabtree Creek."

There are a number of problems with the concept in this paragraph. The first problem is the disturbing failure to incorporate accurate scientific information regarding the nature of PCBs and their fate in the environment. Because PCBs are so persistent in the environment (they can remain for hundreds of years under some conditions), the "dilution" of these sediments with "clean" sediments downstream is irrelevant. The fact that over time the contamination in these sediments has made its way all the way down to Crabtree Lake to deposit in concentrations high enough to justify fish consumption advisories for PCBs is evidence that dilution does not play a significant role in the long term compared to other factors. The above approach addresses the contamination in an outdated "dilution is the solution to pollution" mindset, and assumes that all Reaches of OU1 were contaminated at the same time.

EPA Response: Reach A is not included within OU-1. Reach A is being addressed separately under the on-going Time- Critical Removal Action, which is appropriate, due to its proximity to the Ward Transformer facility and the higher levels of detected PCB concentrations.

The EPA is describing a natural surface water and sediment process that helps explain the distribution of PCBs in the watershed. The EPA is well aware of the long term persistence of PCBs in the environment. The remediation of the PCB contamination at the Ward Transformer facility, Reach A, Reach B, Reach C, Reach D and lower Brier Creek will help reduce the amount of PCBs moving downstream to levels which will support MNR and eventually help reduce sediment PCB concentrations within the biologically active zone in Brier Creek Reservoir and Lake Crabtree to levels which will support the reduction of PCB concentrations in fish and other aquatic biota. The EPA clearly presents its conceptual model of PCB fate and transport in the RI and it does not assume that the downstream reaches were contaminated at the same time, but rather over many years.

The sedimentation rates in the Brier Creek Reservoir and Lake Crabtree are significant. Since construction of the dams forming these impoundments, sediment depths have increased considerably. Source control in the form of the on-going removal action and the proposed action for OU1 will remove contaminated soil and sediment and will result in cleaner sediments entering these impoundments and, by mixing and burial, will become over time not bioavailable to the macrobenthic invertebrate, fish and higher trophic level receptors, including humans.

Regardless of the extent of removal of the primary source (Removal Action areas) and secondary source (OU-1 stream sections with >1 ppm PCB removal), this is not just a dilution-based mechanism, rather a hydrologic process that will continue to occur in this watershed.

29. The concept that “dilution is the solution to pollution” has been applied in the Clean Water Act for decades and is based on the chemical, physical and biological interactions of “conventional” pollutants in water. “Conventional” pollutants are nutrients (nitrates and phosphates), bacteria, heat, acidity, sediment and organic matter (carbon material from the breakdown of plant and animal matter). In the case of these pollutants, estimates of allowable releases assume that degradation, breakdown, biological absorption and/or other natural processes cause reductions in the amount of the pollutant in the water body. In other words, these pollutants are not conserved, but are processed in a way to be removed from the system. Sediment is the exception; the assumption is that sediment is a natural part of the benthos and can be incorporated into the benthos upon settling. PCB’s and other persistent organic pollutants do not have the properties that permit degradation, breakdown, transformation or other removal from the system in appreciable levels. PCB’s are conserved and persist in the aquatic environment, hence the assumptions necessary to apply the “dilution” approach are simply not met.

Furthermore, the impacts of conventional pollutants are short term from a toxicological extent. These conventional pollutants cause fairly rapid impacts to the system in the area of the release. Not so with PCB’s and other persistent organic pollutants. PCB’s exert their effects over long periods for as long as they remain in the system and subject to uptake by biological receptors. PCB’s have no short term (i.e. acute) effects at the concentrations found in aquatic systems at contaminated sites.

An examination of the basic properties of small (low order) streams completely discredits this assumption when combined with the fact that PCBs are incredibly persistent in the environment. Streams are dynamic environments with a wide variety of flow regimes both temporally and spatially. Sediments will be deposited in some areas with lower water velocities that may change depending on the current discharge rate of the stream. During periods of higher than average discharge, these deposition patterns can change significantly. Areas that at one time were depositional can be subject to water velocities that scour and move sediments downstream. Flash flood events (common in these small order streams) interact with floodplain soils, depositing or transporting soils from these areas in unpredictable fashion. The assumption that sediment loadings can be accurately estimated from drainage areas is also scientifically unsound. The statistics cited in the text apply only to water discharges and not sediment. Sediment transport is a factor of many variables, including water velocity, sediment particle size, and land use that are not addressed in either the RI or the FS.

EPA Response: EPA agrees that flash flood events are one of the primary mechanisms for the downstream migration of PCBs in sediment, as stated in the RI.

Because of the flashy nature of the sediment loading and the lack of data for sediment loading during flash flood events, EPA's sediment loading calculations employed a GIS-based model (PLOAD) to estimate annual averages for sediment and PCB loading. The model takes into account land use in the watershed, which is addressed in both the RI and FS. EPA understands the complexity of determining sediment transport loading under widely varying flow conditions. EPA purposely utilized conservative model inputs to provide conservative sediment and PCB loading estimates and calibrated the results against the measured sediment thickness in Brier Creek Reservoir and Lake Crabtree.

30. Another major problem with the quoted passage is that decreasing PCB concentrations in sediments further from the site are not evidence of any sort of "recovery." These reductions are a function of distance from the Ward Transformer site and *the time that these contaminated sediments have had to travel downstream*. In no way, shape, or form should these lower concentrations be construed as "recovery," as the contamination in these downstream areas is likely composed of sediments originally contaminated in Reach A when Ward Transformer first began to process PCB contaminated transformers in the 1960's. Properly cleaning up the waterways downstream from Ward Transformer requires the basic understanding of these facts. Unfortunately, it appears the approach demonstrated in the quoted passage is applied to the rest of the FS as well.

EPA Response: The decreasing PCB concentrations have little to do with the time that the sediments have had to travel downstream. The decreasing PCB concentrations are related to distance from the site and the mixing of contaminated sediments (originating from the Ward site) with uncontaminated sediments from multiple streams and creeks emptying into the creeks, reservoir and lake below the site. As pointed out earlier in these comments, flash floods can carry sediments.

31. Another major problem with the plan to let the downstream waters "recover naturally" is that the reservoir and the lake will have to be dredged one day to prevent sediment from filling in each water body. When the dredging is conducted, the buried PCB-laden sediments will be uncovered, resuspended and once again serve as a contaminant to the aquatic system. A more complete description of MNR and its effectiveness can be found in the attachment "Monitored Natural Recovery in Aquatic Systems".

EPA Response: See response to comment number 36 below.

32. As previously noted in comments on the RI, there is a significant dearth of data on floodplain soils around the various reaches. Perhaps related to this, there is no proposed remedy for floodplain soils within the FS. Data have shown that at least portions of these stream banks exceed the remedial goal of 1 ppm of PCBs. It is critical to clean up these areas as they serve of both sources and sinks for PCBs in and out of the waterways. A failure to act in these areas will only result in the continued addition of PCBs to sediments downstream.

EPA Response: EPA agrees that floodplain soils require further evaluation prior to remediation and responded to this issue earlier. See response to comment number 10.

33. The FS evaluates in a number of different alternatives using “monitored natural recovery” (MNR) as a remedial option. MNR is essentially the act of doing nothing and watching nothing happen. The Feasibility Study notes the lack of long-term data on MNR, and this observation is exactly right. Past experiences with MNR on the James River, Virginia have shown that even as overall sediment concentrations of the toxin Kepone decreased with new deposition over time, Kepone concentrations in fish have remained steady at levels high enough to warrant continued fish consumption advisories more than thirty years after the toxin was originally dumped into the watershed. The Hudson River (NY) offers another example of MNR’s poor record. After more than 25 years following the decision to do nothing, the contaminated sediments have to be removed from the river because fish tissue PCB levels remain unacceptable with insufficient decline for the foreseeable future. Newark Bay and the Passaic River in New Jersey are additional places where PCB’s, dioxins and pesticides from the 1960’s are still present and causing problems. The buried sediments from decades ago are still presenting risks to human health and the environment. This alternative is better described as “No Action with Monitoring.”

EPA Response: *The removal and treatment of PCB contaminated soil and sediment is currently ongoing at the Ward Transformer facility and Reach A. EPA is proposing sediment and floodplain soil removal actions in Reaches B, C and D plus lower Brier Creek. This combination of active remediation of the contaminant source areas together with MNR in Brier Creek Reservoir, Lake Crabtree and lower Crabtree Creek is more than “no action with monitoring.” MNR is an accepted remedial technology that EPA considers appropriate for the conditions found in OU-1. The examples quoted for sites with much higher contaminant concentrations, river environments and/or limited contaminant source controls are not comparable to the conditions in Brier Creek Reservoir and Lake Crabtree.*

The PCB concentrations detected in some areas of the Hudson River sediments are 100 to 10,000 times higher than the highest sediment concentrations detected in Brier Creek Reservoir and Lake Crabtree (Data Summary Report for Candidate Phase 1 Areas - Hudson River, GE, 2004). The river environments mentioned in the comment (including the Hudson River) are dynamic and some buried sediments containing contaminants are likely to be disturbed during high flow events. Therefore, EPA believes that the listed examples are not appropriate comparisons to the conditions found in Brier Creek Reservoir and Lake Crabtree.

34. Sediment sampling in Brier Creek Reservoir and Lake Crabtree detected low PCB concentrations, seemingly less than action levels, but PCB concentrations in aquatic biota are high enough to present risks to both human and wildlife. The PCBs have to be entering the food chain from somewhere, and the most likely place is sediments in the two water bodies. Sediment sampling in these two water bodies was relatively sparse (particularly in Brier Creek Reservoir), and did not look at deep enough sediments in many locations. “Hot spots” of contamination can have significant effects on biota, and need to be identified. Previous sampling efforts have obviously missed something, and need to be revisited. It is unclear if major depositional areas at the mouth of Brier Creek leading into the Reservoir were sampled, but these areas could be a potential source of PCBs for wildlife in the Reservoir and points downstream.

EPA Response: *Local area of Reaches B, C and D may contain higher concentrations of contaminants ("hot spots"), but these "hot spots" should be identified during the pre-excavation sampling program component of the Selected Remedy. Contamination "hot spots" are unlikely in the lake and reservoir, due to the mechanisms that determine the spread and deposition of fine sediments (containing sorbed PCBs) across the water bodies. Two areas where higher contaminant concentrations might be anticipated are the locations where the creeks empty into the reservoir and lake. Sediment samples collected in these areas showed slightly higher PCB concentrations, but not concentrations which would be considered "hot spots." Additional sampling in Lake Crabtree and Brier Creek reservoir will be conducted as part of the MNR component of the Selected Remedy. This sampling program will evaluate the effectiveness of the MNR part of the remedy and will help verify the distribution of PCBs across Lake Crabtree and Brier Creek Reservoir. Section 13 of the ROD documents the components of the Selected Remedy.*

Given the nature of the sediment-mediated transport and deposition of PCBs in the reservoirs, it is difficult to envision a mechanism that would result in the formation of "hot spots" in the reservoirs. PCB concentrations in deeper sediments below the maximum depth of bioturbation have little relevance to biota.

35. The natural recovery (MNR) alternative has been offered as the preferred remedy in Brier Creek Reservoir, Crabtree Lake, and Crabtree Creek in combination with institutional controls (fish consumption advisories) that are already in place. Again, this alternative is not a substantive change from the status quo. Fish tissues would have to continue to be monitored because of the advisory. The only change is that monitoring and review will occur more often. This action is not protective of human health because it allows for continued long-term risks related to the primary risk driver to humans over the entire site- fish consumption. This approach also does not address risks to ecological receptors. The Bald Eagles nesting near Lake Crabtree cannot not read warning signs and do not count how many meals of fish a month they have eaten from these water bodies.

EPA Response: *Not only will the monitoring of fish tissue concentrations be more frequent than they would under a state program intended to re-evaluate consumption advisories, but the tissue data and co-located sediment data that will be collected at yearly intervals will be used to determine the extent to which the remediation goals are attained as part of the CERCLA 5-year review process. EPA recognizes that institutional controls such as fish consumption advisories have no bearing on ecological risk. However, this does not invalidate the MNR alternative. As previously stated, MNR is intended to reduce fish tissue concentrations and, to the extent that this is achieved by primary and secondary source removal in the upgradient streams and the sequestration of contaminated sediments by mixing and burial, risk to all piscivorous fauna will be reduced.*

36. Both Crabtree Lake and Brier Creek Reservoir are used recreationally by virtue of proximity to the population, even if they were originally intended for flood control. The consequence of the recreational uses is that human and ecological uses and health must be protected for the entire system, from the Ward Site proper to Crabtree Creek, below the lake. In order to

maintain the lake and reservoir as open water bodies that can fulfill their role in flood control, each will have to be dredged to remove the accumulated sediment, and maintain depth.

Therefore, the proposed plan must account for:

1. continued recreational use,
2. protection of stable and viable populations of indigenous plants and animals in the waters and nearby terrestrial areas, and
3. dredging to maintain the water bodies as open waters.

The Feasibility Study and the Proposed Plan does not account for these factors. In particular, the effect of the accumulation of sediment in Brier Creek Reservoir and Crabtree Lake on their ability to control flood events is overlooked. The preferred alternative would effectively bar future dredging operations indefinitely. The EPA needs to evaluate whether the minimal long-term gains provided by MNR are outweighed by the risks of degrading the two water bodies' ability to perform their original function.

EPA Response: *EPA anticipates no restrictions on the recreational use of Lake Crabtree for boating, swimming, field sports, running/hiking, or "catch and release" fishing, based on the results of the BHHRA.*

EPA also believes that the Proposed Plan properly balances the need to protect the environment from contaminants against the potential disruption or destruction of aquatic and terrestrial habitats during large-scale excavation-dredging operations in Brier Creek Reservoir and Lake Crabtree.

The potential for future dredging of Brier Creek Reservoir and Lake Crabtree to maintain flood storage capacity is a difficult issue that requires additional study and evaluation by all stakeholders. If dredging is necessary in the future, it can be conducted in accordance with environmental dredging "best practices" to reduce the impact on the aquatic habitats and downstream water bodies.

Future dredging activities in the reservoir(s) would need to be conducted in a manner that would not prevent or delay attainment of the remedial goals in the ROD.

37. One of the major flaws of the FS was the limited scope of the remedial options considered. Because of the small scale of much of the cleanup, it offers an excellent opportunity to evaluate new treatment technologies such as bioremedial techniques like the enhanced microbial decomposition that have been explored by researchers like Bedard et al (2007). The FS also only evaluates dredging the entirety of Brier Creek Reservoir and Crabtree Lake. It is possible that with increased sampling hotspots of contamination could be located, and these limited areas could be dredged at a far reduced cost. The EPA should thoroughly explore these options.

EPA Response: *The Feasibility Study considered multiple technologies and process options, however, bioremedial techniques were not evaluated. The research conducted by*

Dr. Bedard with sediments from the Housatonic River sounds very promising, but it appears that the technology is still in the developmental stage. As noted in earlier comments, PCBs are highly resistant to breakdown by physical, chemical or biological processes. While bench- or pilot-scale testing could be considered, no currently available microbial technology exists with demonstrated suitability for full-scale remediation of lake (or stream) sediments.

When considering treatment technologies for any FS, it is important to evaluate options based on site-specific conditions and the size of the project. For a project such as the Ward Site stream remediation with delicate environmental conditions, treatment options considered must have some proven track record. Furthermore, this is a \$5 million project, which is not a proper circumstance to try new treatment methods such as the one that was mentioned in the comment (Bedard et al, 2007). This particular research was conducted under controlled laboratory conditions using 50-ml vials. This level of proof is absolutely insufficient to consider it as a treatment option for the FS. Even if a non-proven treatment method is included for consideration, it will be screened out due to lack of information on evaluation criteria, such as, implementability, cost, etc.

A vast majority of the tests proven to be successful under laboratory conditions fail under actual site conditions for multiple reasons, and they never elevate to the level of "treatment technology" nor will they ever enter the EPA Innovative Technology Program. For a technology to be considered in any FS, at least a pilot-scale test must have been completed, unless it is a very small site with very little or no environmental impact, in which case, the remediation itself can be used as a pilot-scale study with EPA's approval.

EPA intends to conduct additional sediment sampling in Brier Creek Reservoir and Lake Crabtree as part of the MNR component of the Selected Remedy, however, the identification of sediment "hot spots" is unlikely, because of the reasons identified in EPA Response No. 34.

38. The focus on human health in the FS creates another significant problem. The document makes the assumption that if the human health endpoint is protected, then wildlife receptors will also be protected. Unfortunately, many of the assumptions used in the human health risk assessment such as limited amounts of exposure times are inappropriate for wildlife that spend their entire lives in the exposure area and consuming PCB contaminated biota. CERCLA demands that remedial actions be protective of wildlife, particularly endangered species. The focus on the human health endpoint to the exclusion of all else has resulted in "institutional controls" being a significant component of the preferred alternative. As noted above, since these controls are based on the knowledge and voluntary adherence to fish consumption advisories, they have no bearing on wildlife that cannot make rational decisions regarding diet outside their own instinctual needs. By focusing on human health, the document marginalizes the findings of the Remedial Investigation risk assessments.

EPA Response: Please understand that the EPA cannot remediate contaminated biota. Rather, the FS focuses on the environmental medium that can be remediated, i.e., sediment. The use of institutional controls (i.e., fish consumption advisories) is standard

practice in the implementation of the MNR alternative; thus, it is a significant component of the alternative. Reductions in fish tissue concentrations to the remedial goals that are expected to be achieved under the MNR alternative will result in reduced risk to bald eagles and all other piscivorous receptors. Fish tissue monitoring is included in the MNR alternative, and will include both fillet samples for human health and whole body samples for ecological health. Note that while fish tissue monitoring frequency may be reduced upon attainment of the remedial goals, the recovery process will continue to result in lowering PCB concentrations and provide further reduction in risks to wildlife.

Summary and Recommendations

39. The Proposed Plan is built upon a number of poor assumptions that were carried through from the RI/FS. The one with the most significance to the cleanup of OU1 is that water bodies downstream from the most contaminated areas are recovering. There is absolutely no evidence of this occurring, but this "recovery" was cited in the recommendation of the MNR alternative in Brier Creek Reservoir, Crabtree Lake, and Crabtree Creek. This assumption also allowed Ward Transformer to avoid answering difficult questions regarding the contamination in these areas. Dilution is not the solution to persistent organic pollutants. If sediment concentrations across the two major water bodies were so low, then how are PCB concentrations in fish so high as to require consumption advisories? The failure to sample these reaches more substantially is a major data gap, and additional sampling is required to establish the source of PCBs in these fish.

EPA Response: The PCB concentrations detected in the Brier Creek Reservoir and Lake Crabtree sediments correspond with the PCB concentrations detected in the fish samples, based on the BSAF calculations presented in the Feasibility Study. Additional "hot spots" are not required to explain the RI results. As noted earlier in the responses, the site-specific BSAFs appear to be consistent with those obtained at other PCB sites with low-level contamination of sediments. Were the sediment concentrations an order of magnitude lower than those measured in surface sediment samples and some mechanism present for highly variable contamination, concerns might be raised regarding the existence of un-sampled "hot spots."

40. The assumption in the Feasibility Study that actions protective of human health would also be protective of the environment also affected the recommendations in the Proposed Plan. Dangerous levels of PCBs remain in fish that present a direct risk to endangered wildlife such as Bald Eagles, however the preferred remedial alternative of MNR will do nothing to address these risks. The selection of this alternative in points downstream of Reach D would mean that the proposed plan would not meet all Applicable or Relevant and Appropriate Requirements (ARARs), particularly regarding the protection of endangered species. Voluntary Institutional Controls like fish consumption advisories do not benefit wildlife.

EPA Response: As stated above, reductions in fish tissue concentrations that are expected to be achieved under the MNR component of the Selected Remedy will result in reduced risk to bald eagles and all other piscivorous receptors. While monitoring frequency may be reduced upon attainment of the remedial goals, the process will continue to result in lowering PCB concentrations and provide further reduction in risks to wildlife.

41. Even if the Proposed Plan did not make these assumptions, it would still be unacceptable because it lacks any measure of future source control. The plan makes no mention of cleanup activities at OU0 or the need to excavate contaminated soils in the floodplain. Floodplain soils act as both sources and sinks for persistent organic pollutants, and therefore must be addressed. While we understand that remedial actions have already been selected and begun to be implemented at the Ward Transformer property, they must be discussed when evaluating OU1. If the cleanup of OU0 is inadequate, it will affect the cleanup of OU1 as well. Therefore future documents regarding sites downstream of the Ward Transformer property should include discussions of the remedial actions at OU0 as well.

EPA Response: *The cleanup at the Ward Facility and areas upgradient of Reach B are ongoing and progressing well. Clean up levels selected for those areas are consistent with the OU1 Selected Remedy. The issue concerning characterization of floodplain soils in Reaches B, C, and D is valid and EPA has modified Alternative 4 to address this issue by adding floodplain soil sampling to the pre-excavation sampling program. See response to comment number 10.*

42. Based on the above problems, we recommend that the Proposed Plan be modified to provide greater and more immediate protection to wildlife in addition to eliminating all potential sources of PCBs to OU1. This would require that Monitored Natural Recovery (MNR) be dropped as the preferred alternative downstream from Reach D. The wildlife in these areas does not have fifty years or (likely) more to wait for PCBs to degrade to acceptable levels. Instead, Brier Creek Reservoir and Crabtree Lake need to be sampled more thoroughly to identify any hotspots of contamination and locate the source of the PCBs bioaccumulating in fish. The additional sampling proposed in Reaches B, C, and D should also include floodplain soils, and contaminated areas should be excavated. If these areas of contamination are not addressed, it will not matter how thorough the rest of the cleanup is because PCBs will continue to be added to the streams and lakes every time there is a major rain event as sediments are transported from the floodplain downstream.

EPA Response: *The proposed plan was modified to address the concerns about floodplain soils and the protection of ecological receptors. The ROD for the Ward Transformer OU-1 will include these provisions. EPA believes that the MNR component of the Selected Remedy is appropriate.*

B. Responses to Comments submitted by Golder Associates, Inc. on behalf of Consolidation Coal Company

43. EPA has included the reach of Lower Brier Creek (the portion of Brier Creek that extends from the Brier Creek Reservoir to Lake Crabtree) for remedial action on the basis of a maximum detected PCB concentration of 0.28 ppm in the sediment samples, which is well below the EPA's remedial goal of 1.0 ppm PCBs. This level of PCB concentration does not support EPA's decision to include this reach for remedial action.

EPA Response: *A conservative decision was made when EPA decided to include Lower Brier Creek as part of the Alternative 4 remedial action. Only a limited number of samples were collected along Lower Brier Creek. If the results of the additional sampling for Lower Brier Creek are all below the 1.0 ppm remedial goal, no excavation will be needed along Lower Brier Creek.*

44. EPA should clarify whether the remediation is to be focused along the stream itself (e.g., from bank to bank) or whether it would include the many acres of wetlands adjacent to the stream. This could impact the remedial approach.

EPA Response: *Additional floodplain soil sampling will be required as part of the pre-excavation sampling program component of the Selected Remedy. If the soil concentrations are above the 1 ppm remedial goal, these areas will also require excavation. Potential impacts to wetland areas will need to be assessed as part of the Remedial Design.*

45. Would the gravel access roads in each reach be left in place, or covered with backfill soil, to facilitate the yearly MNR sampling for 15 years? Also, would EPA consider leaving the access road between the Brier Creek Reservoir and Lake Crabtree in place to be developed into a nature trail extension from Lake Crabtree Park, pending community and regulatory approval?

EPA Response: *EPA believes that the access roads are temporary and should be removed after the remedial actions are completed. If the access roads are left in place there could be a corresponding loss of floodwater storage volume, which may not be desirable. During the RI multiple sampling rounds along these reaches were conducted without using access roads, so MNR sampling could be conducted without the roads. Final determination regarding this issue will be made during the remedial design stage of the process.*

46. EPA estimates the amount of backfill to be equal to the amount of excavation. Does EPA intend that the stream bottoms be backfilled to replicate the sediment covered bottoms? This would seem illogical since the backfill would, in due course, most likely be transported into the reservoir and/or lake.

EPA Response: *Yes, EPA intends to restore the excavated stream bottom with similar materials to the same topography that existed before excavation. The ecological habitats need to be restored. Prior to implementing the remedial action, a stream and riparian zone restoration work plan will need to be prepared and reviewed by State and Federal agencies. The current bottom topography has been stabilized to its current elevations as a result of years of erosion/accumulation. Altering the bottom topography could lead to excessive erosion at some places and accumulation of sediments at undesirable locations.*

It is inevitable that some of the backfill will be transported downstream over time; however, the lost sediments will be replenished by the incoming upstream sediments, thereby, maintaining the natural balance and topography.

47. A reconnaissance of the OU1 area indicates that many of the trees are valuable, old growth, hardwood. Some of the wooded areas are designated as "Tree Protection Areas". The proposed remedial action would certainly require many such areas to be cleared.

EPA Response: *This is an important consideration that will need to be addressed during the remedial design stage. All remedial actions will be conducted in such a manner that impacts to the environment would be minimized to the extent possible.*

48. It should be expected that the excavated sediment will be too wet for direct landfill disposal, and will need to be drained prior to transport. Can the sediment be stockpiled along the streams with the decanted water drained back into the stream?

EPA Response: *The Feasibility Study planned these activities assuming that prior to removing sediments from the streams, portions of the stream will be blocked off and the flow will be diverted through pipes running parallel to the stream. Therefore, the moisture content in the sediments will be less than if underwater dredging was performed. The actual moisture content of the sediment will depend on the sediment characteristics.*

Excavated sediments could be placed in temporary storage areas where some of the remaining moisture will also evaporate. Any remaining water may be drained back to the stream, in accordance with state requirements after proper treatment (i.e., filtration and/or activated carbon treatment), or transported offsite for disposal. Final determination regarding this issue will be made during the remedial design stage of the process.

49. The FS indicates that mussel surveys are to be conducted to determine if there are threatened/endangered mussel species in those areas to be remediated and that if they are found the "remedial activities may need to be modified to reduce potential adverse impacts to the threatened/endangered species." (FS p. 4-19) What remedial action modification does the EPA contemplate for this situation?

EPA Response: *Sediment removal in specific areas of the creek where threatened/endangered mussels have been identified may or may not be performed, even if the PCB concentrations in the sediment exceed 1 ppm. Also, excavation work will need to be conducted in such a manner as to avoid burial of the mussels with sediments released during excavation and/or the drying out of the stream segments where threatened/endangered mussels have been identified.*

50. The FS states (p. 4-21) that "There could be adverse impacts to the stream habitats due to stream excavation activities, especially for benthic and other aquatic organisms." Given that the goal of the remedial action is, in fact, to remove the stream sediment, it would seem that EPA should acknowledge that the habitat in question would be completely destroyed and should comment on other impacts that such destruction might have.

EPA Response: *The habitat will be destroyed in areas where sediment excavation is conducted, but by restoring the stream bed these communities should be able to reestablish themselves. Only portions of the creek bed are expected to be disturbed, so the habitats that*

are destroyed should be repopulated relatively quickly by recolonization from nearby and upstream sources.

51. The FS notes that sediment distribution along the stream reaches is dynamic and that sampling to determine the need for remediation of specific areas should be accomplished as part of the remediation. EPA is not clear on whether such sampling should be done prior to beginning remediation or contemporaneously with the remediation. EPA should clarify this because it would impact the approach.

EPA Response: *Details of the pre-excavation sampling program will be worked out as part of the Remedial Design. EPA anticipates that the pre-excavation sampling program will be implemented just prior to the start of remedial activities. Additional verification sampling will need to be conducted contemporaneously with the remediation.*

52. Would sediment sampling have to be repeated after excavation to verify that any remaining sediment is at a concentration less than 1 ppm?

EPA Response: *Yes, EPA anticipates the need for verification sampling.*

53. Would the PCB analyses have to be done by laboratory methods or could immunoassay methods be used?

EPA Response: *EPA may consider the use of PCB immunoassay methods for the pre-remediation and verification sampling. A sufficient number of duplicate samples would need to be collected and analyzed at off-site laboratories to support the PCB immunoassay results.*

54. The FS appears to underestimate the number of samples to determine whether a segment of a reach requires remediation. The FS (p. 4-16) indicates that sediment samples for PCB analysis would be taken along transects that are spaced 50 feet apart along Reaches B, C and D and 100 feet apart along Lower Brier Creek, with three samples taken per transect. The EPA's estimate (FS Table B-4) provides for 800 samples, while using the spacing provided in the text, it is estimated that 1,071 samples would be required. If samples are taken at multiple depths, then this estimate could double to 2,142 samples. If post-remediation verification samples are also required, the number of samples would be even higher. EPA should clarify its sampling strategy.

EPA Response: *The 800 sample estimate was based on 30 transects in Reach B, 42 transects in Reach C, 84 transects in Reach D and 95 transects in lower Brier Creek. Each transect included 3 locations with one sample collected at each location for a total of 753 samples.*

Due to public comments, EPA intends to increase the number of pre-remediation samples collected to cover an additional depth interval and floodplain soil samples. The additional samples will increase the number of pre-remediation samples to approximately 1600 samples.

Post-remediation verification sampling was considered in the cost estimate of the Selected Remedy.

55. The FS indicates that a temporary gravel access road will be needed to accomplish the remediation, but appears to have underestimated the difficulty and impact of access to accomplish the remediation. Because of the limited number of entrance/exit locations along the reaches and the amount and size of equipment needed for remediation, the temporary access road would likely destroy larger areas of forest and wetlands than EPA appears to have estimated. It appears that the restoration acreage included in the FS Table B-4 is only enough for stream restoration and does not include access area restoration. Golder's estimate of the combined stream and access restoration areas is more than three times greater than EPA's allotted restoration area. Reach B is the most accessible, potentially from the north end (shopping/commercial area), south end (Lumley Road), and possibly from areas along the west side of the reach (shopping area). Access to Reach C is likely limited to the north end, from Lumley Road. Access to Reach D would be from the southern end, from Globe Road or private properties just off of Globe Road. Access to the upper end of Lower Brier Creek could be from Airport Road or the Reservoir Dam area, but access to the lower end (south of I-40) is likely limited to a few commercial properties. Because of access restriction, even though only part of a reach might require remediation, even a very small part, the access road will have to be constructed along the full length of the reach, especially if sampling is done contemporaneously with remediation. If sampling is done prior to remediation, there may be reaches where the access road would be less than full length depending on the location of the specific segment to be remediated. The equipment that would need to be used in the remediation will have large turning radii and even a single lane access road would likely have to be about 20 feet wide with enlarged areas for turnaround, pull-off and equipment staging.

EPA Response: During the costing, it has been assumed that the access roads are constructed along the entire length of the stream. The details such as entry points, width of the roads can be incorporated during the detailed remedial design. During the detailed remedial design, there is provision to make justifiable modifications within reason, in consultation with an approval from EPA.

56. The ability to temporarily divert stream flow during the remedial action appears to be understated. The volume of water for a 2-year storm event (3.7 inches of rainfall in a 24-hour period) would range from about 170,000 gallons per minute (gpm) to 0.75 million gpm for individual reaches. The 25-year event (6.6 inches of rainfall in a 24-hour period) would range from about 0.5 million gpm to over 2 million gpm. To divert a 2-year or 5-year event within a reach would, by itself, involve relatively major construction and require even more land to be disturbed than included in EPA's estimate (see comment 13). Given the description in the FS in comparison to these flows, it appears that EPA has presumed that only low flows could be reasonably diverted and that the remedial action construction would be halted during all but small rainfall events. If so, temporary standby or partial demobilization of the contractor should be expected. Is this what EPA anticipates?

EPA Response: *The duration of the stream restoration alternative should only be 3 to 5 months. It can easily be scheduled during the months with lowest precipitation.*

If storm events occur during remediation, most of the extra water will overflow and flood the wetland areas. It is impossible to perform any remediation activities under these conditions. Therefore, diversion will not be an issue. In the event that a 2-yr storm occurs during the remedial activities, work will be immediately suspended until conditions revert back to normal. A judgment call can be made at that point whether a temporary demobilization is necessary. This is how storm events have been handled during the contaminated sediment removal actions conducted at other Sites.

**C. Responses to Comments submitted by Wake County Board of Commissioners
Brier Creek Reservoir Sampling**

57. The sampling conducted to define extent of horizontal and vertical impacts in the Brier Creek Reservoir may be inadequate to justify the current remedy.

The USEPA's preferred plan is to remediate lower Brier Creek, but not Brier Creek Reservoir, which is upstream of the creek. Wake County does not believe that a sufficient number of samples have been collected in the Brier Creek Reservoir (where only six samples were collected) to conclude that no removal of sediments is needed. Wake County requests that additional sampling and laboratory analyses be conducted in Brier Creek Reservoir to better define the vertical and horizontal extent of PCB contamination in the reservoir.

EPA Response: *EPA believes that the data collected during the multiple phases of the remedial investigation is adequate to justify the Selected Remedy. A conservative decision was made when EPA decided to include sediment excavation along Lower Brier Creek as part of the proposed alternative. The Selected Remedy requires additional sampling along Lower Brier Creek prior to any excavation activities. Excavation along Lower Brier Creek will be required only if results from the pre-excavation sampling program show PCB concentrations in sediment and floodplain soil above 1 ppm.*

The Selected Remedy includes a MNA component. As part of this monitoring program, samples from Brier Creek Reservoir will be collected to support the MNA component of the remedy..

58. A Backup Remedial Plan is needed if Monitored Natural Recovery is ineffective
Wake County is concerned about the long-term effectiveness of Monitored Natural Recovery as a remedy for a large portion of Operable Unit-1.

Wake County is concerned that remedial goals *will* be not *be* achieved through MNR in the proposed timeframe. It is important that Wake County continue to receive data regarding the effectiveness of the proposed remediation plan. We therefore request that the USEPA provide a schedule indicating the timeframe it will use to monitor the effectiveness of the proposed remediation plan and develop a plan for additional remedial measures in the event that MNR proves ineffective. The proposed plan should not be allowed to proceed indefinitely if its

effectiveness is limited and PCBs continue to present a health and environmental risk to Wake County citizens. We propose that the PRPs provide a monitoring program, at no cost to Wake County, for sediment, water quality and aquatic species. The geographic extent of the monitoring program should include locations in the lakes, locations upstream of the lakes (control stations), and locations downstream of the lakes (migration stations). If the remediation plan is not successful in reducing the health risks, as indicated by the monitoring data, additional measures should be implemented, at no cost to Wake County, to address the impacts to these watersheds. In the event that the sampling shows that MNR is not effective, the USEPA should agree to modify the remedy.

EPA Response: *As part of the Remedial Design, a monitoring program plan will be developed. The monitoring program plan will discuss sample locations, media and frequency. The monitoring program plan will be made available to Wake County and its citizens.*

As required under the Superfund program, five years after construction completion of the remedy, and every five years thereafter, remedy reviews will be conducted. As part of these reviews, EPA will evaluate the remedy to ensure it continues to be protective of human health and the environment. In addition, a technical assessment of the remedy will be conducted to determine if the remedy continues to function as intended by the decision documents. If these evaluations show that the remedy is not protective or not performing as expected, additional response actions could be recommended.

59. The O&M of the Flood Control Structures will be more costly

Wake County's required maintenance of the flood-control structures may involve the contact with and potential generation of impacted sediments. The alternative chosen by the USEPA may cause Wake County to commit resources and fiscal obligations that it believes should be borne by the Potentially Responsible Parties (PRP's).

Wake County owns, operates and maintains the flood control structures associated with Brier Creek Reservoir and Lake Crabtree. Future maintenance of these structures will likely involve contact with contaminated sediments and potentially the removal of contaminated sediments from these reservoirs. It is not clear whether or not the USEPA contemplated these activities in the development of its Remedial Action Plan for OU-1. However, it is clear to Wake County that the cost of conducting maintenance, inspection, rehabilitation and replacement activities for the flood control structures will increase if disturbance of the contaminated soils require specialized worker health and safety protective measures, or if the disturbed or dredged sediments are classified as a hazardous material.

Wake County believes that the additional costs to implement measures to address the handling and disposal of contaminated sediments should not be borne by Wake County. We request that the PRP's establish a fund, bond, or line-of-credit to address the incremental costs incurred by Wake County relative to HAZWOPER training and personal protective equipment, sampling and laboratory analyses for sediment characterization, and potentially the management and disposal of contaminated sediments should dredging be required in

either Brier Creek Reservoir or Lake Crabtree for flood control structure maintenance, inspection, rehabilitation and replacement activities.

EPA Response: *The potential for future dredging of Brier Creek Reservoir and Lake Crabtree to maintain flood storage capacity is a difficult issue that requires additional study and evaluation by all stakeholders. EPA agrees that any future dredging of these reservoir(s) may involve disturbance of potentially contaminated sediment. Dealing with contaminated sediments when dredging these types of reservoirs is common, because they are likely to collect contamination from a variety of urban and industrial sources within the watershed. If dredging is necessary in the future, it could be conducted in accordance with environmental dredging "best practices" to reduce the impact on the aquatic habitats and downstream water bodies. Coordination between the appropriate stakeholders would be necessary to ensure that future dredging activities in the reservoir(s) are conducted in accordance with the appropriate regulations*

At this time, and based on the available information, EPA does not believe adequate justification exist for establishing a funding mechanism to address the potential incremental costs that Wake County may incur relative to HAZWOPER training and personal protective equipment, sampling and laboratory analyses for sediment characterization, and potentially the management and disposal of contaminated sediments should dredging be required in either Brier Creek Reservoir or Lake Crabtree for flood control structure maintenance, inspection, rehabilitation and replacement activities. Contaminated sediments from a variety of urban and industrial sources within the watershed is expected to accumulate in structures like this, and should dredging be performed, Wake County may incur these costs due to contamination from a variety of other sources within the watershed. In addition, due to the relatively low PCB levels detected in sediments from these reservoirs it is not clear at this time what additional cost, if any, Wake County may incur.

60. Funding is needed for supporting the State's restrictions on fish consumption

Wake County continues to incur costs to enforce the State's restrictions on fish consumption and should be compensated for this work. The USEPA is relying on MNR to address impacted sediments in Brier Creek Reservoir and Lake Crabtree (clean sediment deposited over contaminated sediment over time). However, fish contamination is the primary concern relative to human health exposure and impacts on the ecosystem continuing even at low levels of sediment contamination. This is evidenced by State fish consumption advisories extending to the Neuse River. The County will be burdened for many years to monitor fishing activities in these watersheds to minimize the exposure of contaminated fish to the public in order to comply with the State's restrictions on fish consumption. Funding should be provided to Wake County annually for the production, placement, rehabilitation, maintenance and replacement of postings and signs, and other public notification requirements.

EPA Response: *EPA appreciates the effort and support provided by Wake County officials on this project, and their commitment to monitor fishing activities in these watersheds to minimize the exposure of contaminated fish to the public in order to protect Wake County's*

citizens. The Selected Remedy includes components to continue or enhance existing North Carolina fish consumption advisories and signs, and to develop and implement educational and community outreach programs. As part of the remedial design, an implementation plan to comply with these two components of the remedy will be developed. Coordination between the appropriate stakeholders would be necessary to develop this plan. The plan will define the goals, roles, duties and responsibilities of the parties involved and the means used to achieve the intended goals.

61. Response Planning is needed for Postulated Natural Disasters

Response Planning is needed for postulated natural disasters. Wake County lies in an area of the southeastern United States that is prone to severe weather events, including severe thunderstorms, tornadoes and hurricanes resulting in significant rainfall and excessive winds. The County is concerned that a significant storm event could cause the potential release of contaminated sediments to downstream locations, an event for which the County is unprepared to mitigate. We request that the USEPA prepare an Emergency Response Plan to address how the County might respond to the sudden release of contaminated sediments to downstream locations in the event of a natural disaster.

EPA Response: *EPA together with the appropriate federal and State entities could assist Wake County in developing the appropriate plan to address how the County might respond to a potential and sudden release of contaminated sediments in the event of a natural disaster.*

D. Responses to Comments submitted by The Raleigh-Durham Airport Authority ("Authority")

62. After careful review of the Plan, it is the opinion of the Authority that the Plan's "SUMMARY OF THE PREFERRED ALTERNATIVE", which lists the preferred alternative as being Alternative 4, represents the best approach for remediating the PCB contamination.

Since much of the investigation and subsequent work related to Operable Unit I is on or adjacent Authority property the Authority requests joint review and update, as necessary, of Access and/or Entry Authorization Agreement documents regarding study/investigation and construction access, to include means and methods of remediation and other work, prior to either such activity being initiated. These aforementioned documents specify the responsibilities and requirements of all parties involved in past and current investigation and/or remediation activity. While these previous Agreements are relevant to past and ongoing activity at the Ward Site and Reach A they may not present a complete and viable description of requirements and responsibilities for work anticipated for Operable Unit I.

EPA Response: *EPA appreciates the Raleigh-Durham Airport Authority comment supporting the Selected Remedy.*

EPA agrees with the Raleigh-Durham Airport Authority regarding the need to update existing and/or obtain a new access agreement, so that the agreement reflects the

requirements and responsibilities for work anticipated to be conducted on airport property as part of the selected remedy for Operable Unit 1.

E. Responses to Comments submitted by The North Carolina Wildlife Federation (NCWF)

63. The North Carolina Wildlife Federation is a non-governmental organization with the mission of "being the leading advocate for all North Carolina wildlife and its habitat". The organization was founded in 1945 and is the state affiliate to the National Wildlife Federation. We number over 50,000 members, supporters and affiliate club constituents across the state.

NCWF and its supporters recognize the relationship of healthy habitats and the opportunities these places afford outdoor recreation activities including, but not limited to, hunting, fishing, birding and paddling.

Upon review of the Superfund Proposed Plan for the impending clean up of the polychlorinated biphenyls (PCBs) — contaminated soils and sediment, NCWF concurs with EPA and North Carolina Department of Environment and Natural Resources (NCDENR) that of the remediation alternatives under consideration, alternative 4 is the preferred alternative.

The comparative analysis of the alternative is thorough in its evaluation of the criteria used for Superfund project feasibility studies. Alternatives 1, 2, and 3 are not sufficient for the criteria of overall protection of human health and the environment nor short-term effectiveness. In addition, all *the* pro-active components of those alternatives are included in the other two alternatives.

In comparison of Alternative 4 and 5, the difference is that Alternative 5 would include either dredging or excavating the sediments in Briar Creek Reservoir and Lake Crabtree with the understanding that this would be a total, in full removal project.

NCWF is concerned with the complexity, duration, and habitat impacts that are associated with Alternative 5.

As the Comparative Analysis points out, the large scale sediment removal project called for in Alternative 5 could have far reaching negative impacts on benthic and other aquatic biota in the habitats in the reservoir and lake. NCWF is also concerned with impacts said project may have on documented Bald Eagle populations within the ecosystem in question. A further concern NCWF has is on the potential removal of present woody debris. A variety of aquatic species depends on natural accumulations of trees, branches, and root wads, which comprises woody debris, as this is the biological keystone of any river or lake system. No alternative that would allow removal of woody debris from the reservoir and lake is acceptable to NCWF, and NCWF is concerned that Alternative 5 would compromise any present woody debris.

The timeframe comparisons between Alternatives 4 and 5 are considerably different. Due to the complexity of the large scale removal components of Alternative 5 including planning, designing and implementation, the project duration will be significantly longer than for the

excavation and off-site disposal efforts outlined in alternative 4.

The longer time period would also mean that access to the reservoir for outdoor recreation would be curtailed during the duration of the project. Since the time period for completing Alternative 5 is significantly longer than for 4, the attainment of acceptable PCB concentration levels in fish would be a difference in approximately 5 years. However the planning and implementation durations associated with 5 are significantly greater which lessens the period for achieving the final desired outcome. Having stated these facts, NCWF realizes the cost differential between 4 and 5 is \$535,993,000. This a monumental cost associated with a minimal gain in attained goals in comparison with the time frame gains.

In summation, NCWF restates its support for EPA and NCDENR's preferred Alternative 4. This alternative would include: continue existing North Carolina fish consumption advisories and signs, conduct educational and community outreach programs, conduct pre-excavation sampling and endangered mussel study, excavate sediments in Reaches B, C, D and lower Brier Creek, and transport sediments off site for appropriate disposal, site and stream restoration; MNR — periodic monitoring of sediments and aquatic biota in the Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek, and Conduct 5- year review. Alternative 4 is the best habitat alternative when degradation, costs and disruption of outdoor recreation activities are factored.

EPA Response: *EPA appreciates the North Carolina Wildlife Federation's (NCWF) comments supporting the Selected Remedy.*

F. Responses to Comments submitted by The North Carolina Wildlife Federation Capital Chapter (NCWF CC)

64. The NCWF CC is a local chapter of the North Carolina Wildlife Federation. Our chapter has recently formed as a non-governmental organization to protect and enhance the natural resources and wildlife habitats of the NC Capital Area for all to enjoy. According to the Superfund Proposed Plan Fact Sheet for cleaning up the areas down gradient of the Ward Transformer facility there are five alternatives. The NCWF CC supports Alternative 4: *Excavation and Off-Site Disposal of Sediments in Reaches B, C, and D, and Lower Brier Creek; Monitored Natural Recovery in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; and Institutional Controls.* Alternative 1 — *No Action* and Alternate 2 — *Institutional Controls* do not meet industry standard to treat the damage caused by polychlorinated biphenyls (PCBs). The fact sheet states, "Alternative 1 does not offer protection to human health or the environment in the short or long—term basis." Alternative 2 does not require monitoring, thus the "long-term reduction of risks would not be known." Neither of these Alternatives is acceptable. Alternate 3 — *Monitored Natural Recovery (MNR) and Institutional Controls* is not know to meet the goals of a Superfund cleanup and if implemented "may take a long time to achieve." Alternative 4 and Alternative 5 — *Excavation of Sediments in Reaches B, C, D, and Lower Brier Creek; Excavation/Dredging of Sediments in Brier Creek Reservoir and Lake Crabtree; Off-Site Disposal of Sediments; MNR in Lower Crabtree Creek and Institutional Controls* will meet the goals according to the Fact Sheet; however, the NCWF CC is

concerned with the vast expense, potential degradation of existing habitat, and length of time to implement restoration proposed within Alternative 5.

EPA Response: *EPA appreciates the North Carolina Wildlife Federation Capital Chapter's (NCWF CC) comments supporting the Selected Remedy.*

G. Responses to Comments submitted by James H. Sherman

65. The USEPA failed to understand that future dredging of Lake Crabtree and Briar Creek Reservoir may be necessary to ensure their continued function in flood control. If these lakes are dredged in the future, as is probable to restore their original design function, the sediment disturbed by unqualified companies could create an ecological disaster in the lakes and distribute large quantities of contaminated sediment to downstream areas. The USEPA must ensure that future dredging of Lake Crabtree and/or Briar Creek Reservoir is performed by qualified individuals and the sediments are disposed of appropriately. There is a long history of contaminated sediments being removed from the watershed, without anyone being able to identify their disposal location. That history must not be repeated. Institutional Controls against dredging Lake Crabtree and Briar Creek Reservoir must be required, or those lakes must be dredged now. Without resolving the issue of future dredging and disposal of contaminated sediments, there can be no MNR, there will be no "Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment," and the "Overall Protectiveness of Human Health and the Environment" will not be attained (and could be made worse).

EPA Response: See response to comment number 59 regarding dredging.

EPA believes that between the on-going removal action; and the OU1 additional creek excavation and MNR, the overall Site remedy will successfully achieve "Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment" and "Overall Protectiveness of Human Health and the Environment"

66. Data contained in the Remedial Investigation led to the USEPA conclusion that the concentrations of PCBs in sediment were not increasing with depth. Because available data indicate that the PCBs are not being buried by new sedimentation, but instead are evenly distributed in the sediments, the data indicate that MNR alone will not be successful in attaining the cleanup goals. Any MNR should be quantified in a demonstration project before being selected as a final remedy.

EPA Response: *EPA believes that source control in the form of the on-going removal action and the proposed action for OU1 will remove contaminated soil and sediment and will result in cleaner sediments entering these impoundments. EPA believes that enough data is available at this time to select the remedy and continue source removal by excavating Reach B, Reach C, Reach D and lower Briar Creek together with MNR. A monitoring program will be developed to evaluate the effectiveness of MNR and the overall Selected Remedy for OU1.*

67. Data contained in the Remedial Investigation clearly show that concentrations in fish have not decreased, and may have even increased, during the last five years. As such, the data indicate MNR is not restoring the fishery. Some degree of dredging Lake Crabtree should be used in combination with MNR to restore the fishery and ecological habitat.

EPA Response: *EPA believes that the first step on MNR is source removal. After source removal activities are completed, as proposed in the Selected Remedy, it will be more appropriate to start evaluating the effectiveness of the MNR component of the remedy.*

68. Overall, the sediment data demonstrate MNR has not worked over the past 20 years and will not resolve this problem within 9 years, as is assumed in the Proposed Plan. Some combination of "Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment" is necessary to compliment MNR in downstream areas.

EPA Response: *The overall Site remedy does not rely on MNR only. Section 13 of the ROD documents all the components of the Selected Remedy. The on-going removal action (which include soil treatment) together with the excavation component of the Selected Remedy will achieve source removal. EPA believes that source removal together with MNR will successfully achieve "Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment."*

69. I believe the USEPA has vastly overestimated the costs dredging operations at Lake Crabtree and Briar Creek Reservoirs. While I have not reviewed the longterm maintenance plans for those reservoirs, I believe there are estimates of the cost of dredging those reservoirs in their long-range budgets. Those estimates are certainly lower than \$250 Million/reservoir. USEPA should work with the County and the Airport Authority to better understand their estimated future dredging needs and costs and revise the cost estimates in the Proposed Plan accordingly.

EPA Response: *EPA believes that the cost estimates developed for the Proposed Plan are appropriate for the intended use.*

70. The EPA should work much closer with Wake County, the city of Raleigh, the Airport Authority, the Town of Morrisville, and the Town of Cary to develop an innovative solution to the dredging issue. The current proposed Plan lacks creativity and should have presented remedial options somewhere in between Alternative 4 (\$5 Million) and Alternative 5 (\$540 Million).

EPA Response: *EPA believes that the Selected Remedy will adequately protect human health and the environment and will achieve remediation goals. EPA looks forward to continuing to work with Wake County, the city of Raleigh, the Airport Authority, the Town of Morrisville, and the Town of Cary, as this clean up project moves forward.*

H. Responses to Comments submitted by the North Carolina Association of Black Lawyers' Land Loss Prevention Project (LLPP)

Please find below comments on behalf of the North Carolina Association of Black Lawyers' Land Loss Prevention Project (LLPP). LLPP was founded in 1982 to address the loss of land by African-American landowners. The mission later was expanded and the organization provides free legal services to all low- income landowners throughout North Carolina in an effort to protect their property from loss or harm, including environmental harm.

Although the submitted plan only deals with Operable Unit One, it is not clear when or whether the public has the opportunity to comment on outreach actually being planned. "Outreach" is not clearly laid out or defined, although there are references to the fact that "outreach" will be done, and this plan is only highlighted in bullet form. We are offering comments to the agency to express our concern with the apparent lack of involvement by community members and community-based organizations in this process.

The comments include suggestions for the design and implementation phases of Remedial Alternative 4.

- 71.** Fish consumption advisories and signs should contain clear, consistent language and be more widely posted.

At the public meeting on August 14, 2007, Wake County officials indicated that there are 30 bilingual signs posted around Lake Crabtree. Given that Lake Crabtree is a 520-acre lake, this number should be increased to ensure that people are actually informed. There should be increased posting at commonly-used fishing locations. Additionally, it is of concern that no mention was made of signs around water bodies besides Lake Crabtree. Of course, signage is needed at common fishing spots along Brier Creek Reservoir, Brier Creek, Little Brier Creek, Crabtree Creek, and any other contaminated creeks or tributaries, especially since there have been higher PCB levels in fish caught in some of these water bodies than in Lake Crabtree.

As of 9/18/07, the Wake County website for Lake Crabtree contains a fish advisory page, at <http://www.wakegov.com/envirohealth/fish/default.htm>, that states, "DO NOT take any fish from Lake Crabtree, or Crabtree Creek, just above or below the lake. Later in this page, as well as in the Fish Advisory Fact Sheet <http://www.wakegov.com/envirohealth/fish/factsheet.htm>, it recommends eating only one meal per month of fish other than carp or catfish. Of the pamphlets and advisories available, only the pamphlet "Lake Crabtree and PCBs: What you should know," Summer 2007, indicates that only one meal per month should be eaten of carp, catfish, and largemouth bass from Crabtree Creek, including upstream of Lake Crabtree. In addition, the links on the Wake County site lead to the Summer 2006 pamphlet, which does not include the advisory against eating fish upstream of Lake Crabtree. I found the Summer 2007 pamphlet only through a link from the Neuse Riverkeeper page.

The information in these publicly-available materials needs to be made simple, clear, and consistent. The likelihood that fishermen will be interested in comparing and parsing the various advisories and pamphlets is small at best. If Wake County is pursuing a catch-and-

release-only policy, then even the once-a month allowed consumption for certain fish in certain areas is not totally consistent with this policy. The danger is that fishermen will see contradictory information and disregard all of it, assuming it is out-of-date or otherwise not to be taken seriously. Please work for maximum consistency and clarity in all materials, in English and Spanish, especially in the posted signage.

EPA Response: *Signs were installed at common fishing spots along all OUI areas where fish advisories were issued by the State of North Carolina. Table 6 and 7 of the ROD (see Section 6.6.2) describe the areas within OUI, where fish advisories were issued and the criteria for limiting fish consumption. All signs provided by EPA followed the State fish consumption advisory recommendations for no-fish consumption or limited consumption depending on the PCB levels for each location.*

EPA agrees that the all materials should be simple and clear. EPA will work toward that goal. The "catch and release" policy implemented at Lake Crabtree County Park was the county's answer to a simpler and easier to follow and enforce fish consumption advisory at the county park.

72. Community outreach programs should include face-to-face communication with fishermen, targeted mailings, and information about alternative fishing locations.

The Proposed Plan states that "community outreach and public educational programs would also be conducted to inform the public of the fish consumption advisories and signs." There has also been no explanation by the Agency as to how it determined which language(s) the signs should be posted in, and how it was determined who is actually fishing in the lake. The agency and county should utilize community-based organizations that are actually engaged in community work with the individuals most likely to be using the lake or streams for fishing. This outreach should include face-to-face communications with fishermen by county park rangers or health department employees.

Outreach materials should also include targeted mailings to residents and businesses nearest to the affected water bodies. Address information can be obtained from Wake County's tax office and from online GIS maps.

Materials should offer suggestions as to alternate fishing locations that are known to have safe levels of PCBs and other contaminants. Fishermen who are given other choices of where to fish would probably be more likely to forego eating contaminated fish.

EPA Response: *The Selected Remedy includes components to continue or enhance existing North Carolina fish consumption advisories and signs, and to develop and implement educational and community outreach programs See Section 13 of the ROD. As part of the remedial design, an implementation plan to comply with these two components of the remedy will be developed. Coordination between the appropriate stakeholders would be necessary to develop this plan. The plan will define the goals, roles, duties and responsibilities of the parties involved and the means used to achieve the intended goals.*

EPA appreciates and recognizes the suggestions and welcomes NC LLPP future input when developing the plan.

73. Transportation of sediments off-site for "appropriate disposal" must be done in such a way as to protect the health of nearby residents and the health of residents at the ultimate disposal site.

The Proposed Plan does not indicate where the excavated sediment will be taken for disposal, only that the disposal will be "off-site" and "appropriate." This leaves very large gaps left for the design and implementation phases regarding whether the health of the residents near the transport and disposal sites will be taken fully into account no matter their race or income level.

As is well-known in North Carolina and in the national environmental justice movement, a PCB landfill was sited in the early 1980s in a small, low-income, mostly African American community in Warren County. The site was chosen despite community protest, and despite a very shallow water table in an area where residents relied on well water. As lead agency, and in accordance with Administrator Steven L. Johnson's reaffirmed commitment to environmental justice in his November 4, 2005 letter, the EPA should take the responsibility to ensure that, through all phases of excavation, transport, interim storage, and final disposal, the health of the nearby residents is given full attention, regardless of whether the community is small, low-income, and/or primarily a community of color. As you appreciate, disposal should not occur in a community that already bears a disproportionately large number of undesirable land uses. Disposal should occur where it is safest to do so, not where the community is viewed as least powerful or least likely to protest.

Choosing an alternative that involves off-site disposal rather than on-site treatment requires a commitment to the health of those living and working near the disposal site. While site determinations will presumably be made mostly in the design and implementation phases, the commitment should be made explicit in the Plan, rather than merely asserting that the off-site disposal will be "appropriate."

EPA Response: EPA agrees that the disposal of the excavated material should occur "where it is safe to do so". Characterization and disposal of the excavated material will be conducted in accordance with all applicable relevant and appropriate requirements (ARARs). Additional sampling of the material will be necessary prior to determining the specific requirements that would apply, and the qualified facilities that are permitted by the State and/or Federal government to receive the material.

74. The Plan should include safety measures regarding human contact with sediment before and during excavation

According to the Proposed Plan the "main risks associated with contaminants at the Operable Unit 1 study area are due to human consumption of contaminated fish; and the potential exposure to sediments with PCB concentrations above 1 mg/kg" (emphasis added) While the Plan includes fish consumption advisories and signs to safeguard the public, it does not

include measures to safeguard the public from potential exposure to sediment prior to and during excavation. Ways to address this could include incorporating information about sediment exposure in the "educational and community outreach" programs; posting sediment exposure signs in areas of concern; ensuring excavation workers will have proper apparel and equipment to protect them from PCB exposure; and restricting public access to areas with high PCB levels in sediment.

EPA Response: *EPA will take measures to prevent potential exposure to contaminated sediments at unacceptable levels. EPA will ensure cleanup crews wear the appropriate personal protective equipment.*

I. Responses to Comments submitted by The Town of Cary

75. The Town of Cary owns property adjacent to Crabtree Lake which is owned by Wake County. The presence of polychlorinated biphenyls (PCBs) has been confirmed in the lake. The property owned by the Town of Cary serves as a part of the Town's greenway system and is used by hundreds of citizens. During and after significant rain events, water and sediment from Crabtree Lake and its tributaries affect this adjacent greenway. The cleanup and monitoring of Crabtree Lake is of vital importance to the health of citizens of Cary. I am writing this letter in support of the comments and recommendations made by Tony Gurley, Chairman of the Wake County Board of Commissioners in his letter dated October 1, 2007 addressed to you.

EPA response: *EPA recognizes the importance of Lake Crabtree to the Town of Cary and its citizens. PCBs were not detected in Lake surface water samples or soil samples collected from the greenway areas. Unacceptable risks exist due to consumption of contaminated fish from the Lake. The selected remedy requires that sediment and fish will be monitored until remediation goals are achieved.*

J. Responses to Comments submitted by The City of Raleigh

The City of Raleigh has carefully examined the EPA Proposed Remedial Action Plan for OU1 at the Ward Transformer Site. The City of Raleigh is appreciative of the substantial progress now being made in the removal action. It appears that the threat of continued pollution to the Crabtree Creek and Brier Creek systems from the site will soon be eliminated.

The City also appreciates the work done to move forward the final Remedial Action Plan for the Site and the waterways contaminated by PCBs and other toxic and hazardous wastes released from the Ward Transformer Site. The presentation of the Proposed Remedial Action Plan for OU1 is a significant benchmark. The City has previously expressed its concerns about the adverse impact the Site and its contamination has had on the quality of life for the citizens of Raleigh and Wake County.

The City has reviewed the comments being submitted by the Environmental Stewardship Concepts (the consultant to the Technical Advisory Group), Wake County

and Dr. Jim Sherman. The City commends those comments to USEPA for its careful consideration. The comments reflect several of the City Council's findings consequent to the report from the PCB Task Force created by the most impacted local governments in Wake County.

Inadequate Sampling Data:

- 76.** The City shares the concerns expressed as to adequacy of the sampling information upon which decisions are proposed to be made on the remedial action in Brier Creek Reservoir. The City concurs with their comments that too few samples have been taken to conclude the area is without sufficient concentrations to require removal of the contaminants. Accordingly, the City requests that the Proposed Remedial Action Plan be modified at a minimum, to include more extensive sampling of the sediments in Brier Creek Reservoir before a final decision is made on sediment removal. The nature of sediment accumulation would strongly suggest that Brier Creek Reservoir should be one of the main repositories of contaminated sediments from the Site. Since the primary contaminants of concern bind to soil particles and thus move, or stay fixed in place, according to sediment transport, Brier Creek Reservoir should have functioned as a collection point for the Ward Transformer Site contaminants of concern for many years. Given the actionable concentrations in Brier Creek between the Brier Creek Reservoir and Lake Crabtree and the high PCB levels in the Reach D immediately upstream of the Reservoir, the potential for high PCB and other toxic or hazardous concentrations in the sediment deposits in Brier Creek Reservoir requires more study to conform to the Recommendations in the PCB Task Force Findings and Recommendations adopted by the Raleigh City Council. In particular the Following determinations support such a request:

II. 5. The local governments should request that EPA and NCDENR develop a remedial plan to prevent further spread of the PCB contamination downstream of Lake Crabtree and to restore the natural resources already impacted, including Lake Crabtree. In the development of the remedial plan and its implementation, EPA and NCDENR should be requested to consult with representatives of local governments.

II. 10. Complete removal of contaminated sediments from Lake Crabtree and the waterways leading to and from Lake Crabtree should be evaluated as a remedial option in any remediation plan, as without removal of the sediments the fishery will not be restored, contamination will continue to migrate, and risks from exposure to impacted soils and sediments will remain unchanged. In the development of the remediation plan for the natural resources and its implementation, EPA and NCDENR should be requested to consult with representatives of local governments.

II. 16. EPA and the local governments should assemble maps providing current and potential land uses/zoning restrictions for the impacted waterways and adjacent properties and ensure that current and potential future uses are thoroughly evaluated by the PA and do not result in unacceptable risks to the community from exposure to contaminated soils and sediments. Local governments and park officials should also consider contamination and health risks when approving any project

that will bring more people into contact with the contamination or increase current exposures to the contamination.

EPA Response: *EPA believes that enough data is available to select the remedy and continue source removal activities along Reaches B,C, and D. A conservative decision was made when EPA decided to include excavation along Lower Brier Creek as part of the Alternative 4 remedial action. The selected remedy requires additional sampling from lower Brier Creek prior to any excavation activities. If the results from the additional sampling along Lower Brier Creek show results below the 1.0 ppm remedial goal, no excavation will be required along Lower Brier Creek.*

The selected remedy also includes a monitoring program component. As part of this monitoring program, samples from Brier Creek Reservoir will be collected.

Unmitigated Impacts to Wake County:

77. The City also joins in the comments previously cited which seek a revision of the Proposed Remedial Action Plan to address the burdens left with Wake County should the reservoirs not be cleaned of PCBs in the Remedial Action. The impoundments were created as flood control impoundments. The continued deposition of sediment limits the value of the impoundments and will ultimately require sediment removal to restore the appropriate level of flood control. The impoundments are a critical source of protection to heavily populated and developed areas in the City, including the Crabtree Valley Shopping Mall. When the sediment removal occurs, the County will be confronted with substantial additional costs because of the PCBs and other toxic and hazardous substances in the sediment. The Proposed Plan does not address a means to compensate the County for those costs which arise exclusively from the Ward Site.

See response to comment number 59 above regarding potential dredging.

Prompt Restoration of Lost Uses of Crabtree Creek:

78. As the above cited provisions and other sections of the PCB Task Force Findings and Recommendations show, the City is concerned with the adverse impacts its citizens have suffered in their use of natural resources, in particular fishing and other uses of the Crabtree Creek system. The City continues to urge that a Final Remedial Action Plan be adopted expeditiously, but that the plans also assure the most prompt restoration of Crabtree Creek to the full panoply of uses that it supports under the Clean Water Act.

EPA Response: *EPA plans to implement the Selected Remedy as expeditiously as possible while complying with the requirements of CERCLA and the National Contingency Plan (NCP).*

Conclusion

79. The City of Raleigh is appreciative of the courtesy extended by USEPA throughout the process. The City is hopeful that relationship will continue and that this set of comments, along with the comments of the TAG and Wake County will be given strong consideration by USEPA in its Final Remedial Action Plan. While the costs of Alternative 5 are high,

the further information in the Proposed Remedial Action Plan shows that sediment removal from Brier Creek Reservoir would be approximately \$102 million of the \$541 million in total costs for Alternative 5. As with other comments, the City questions whether that cost estimate is excessive. The City urges USEPA, in consultation with the PRP's if necessary, to seek less expensive means to remove the sediment from Brier Creek Reservoir as it likely contains an unacceptable level of pollution which will continue to further degrade Lake Crabtree.

EPA Response: Based on the information available to date, EPA is not recommending excavation of Brier Creek Reservoir as part of the Selected Remedy.

K. Responses to Comments submitted by Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. ("PEC" or the "Company")

Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. ("PEC" or the "Company") has been actively engaged with the United States Environmental Protection Agency ("EPA") and the North Carolina Department of Environment and Natural Resources ("NCDENR") on the cleanup of the Ward Transformer site. The Company appreciates the opportunity to comment on the EPA's Superfund Proposed Plan for the OU1 Site issued in August 2007 (the "OU1 Proposed Plan").

Summary of PEC's Comments on OU1 Proposed Plan

The Company and its environmental consultants have carefully reviewed and considered the OU1 Proposed Plan and recommendations concerning how to address polychlorinated biphenyl ("PCB") contamination at the OU1 Site, which is comprised of various areas located downstream from the Ward Transformer site and Reach A, including Reaches B and C (unnamed tributaries to Little Brier Creek); Reach D (Little Brier Creek); Brier Creek Reservoir; Lower Brier Creek; Lake Crabtree; and Crabtree Creek. PEC has been actively involved and assisting with the contaminated soil/sediment removal action at the source areas of the PCB contamination—specifically, the Ward Transformer facility, Reach A and certain other immediate surrounding areas (collectively, the "Facility"). This EPA-approved removal action, which began in August 2007, is a complete excavation and cleansing of soil and sediments at the Facility that not only will eliminate the original sources of PCB contamination, but also prevent future down-gradient migration of PCB contamination from these source areas into the waterways constituting the OU 1 Site.

PEC believes that virtually all source contaminants will be removed by the ongoing removal action at the Facility. The Company understands that EPA and NCDENR are proceeding to ensure that remaining adverse environmental and ecological impacts, if any, to the OU1 Site from past business operations of the Ward Transformer Company ("Ward") are addressed in an appropriate manner. After considering the five (5) Remedial Alternatives set forth in the OW Proposed Plan, PEC supports implementation of Alternative 4 as modified below ("Modified Alternative 4"). PEC agrees with EPA's position that Monitored Natural Recovery ("MNR") and institutional controls are especially suitable for the OU1 Site, where the

primary, original source of PCB contamination at the upgradient Facility and Reach A already is being removed. PEC understands EPA's reasoning to include additional excavation and off-site sediment disposal of PCB constituents in Reaches B C and D under Alternative 4 because sediment sampling data shows PCB concentrations in Reaches B, C, and D above EPA's remedial goal and cleanup level of 1.0 parts per million ("ppm"). PEC believes that EPA's proposal to require additional pre-excavation sampling and excavation/dredging removal actions in Lower Brier Creek (that portion of Brier Creek located between Brier Creek Reservoir and Lake Crabtree) is unwarranted because sediment sampling in Lower Brier Creek does not show PCB concentrations above EPA's remedial goal of 1.0 ppm. Instead, PEC believes that appropriate MNR with institutional controls should be implemented for Lower Brier Creek.

I. Introduction

PEC was one of hundreds of companies that did business with Ward during Ward's 40- plus years of operations at the Ward Transformer site located along Mount Herman Road in a predominantly industrial area of northwestern Raleigh, Wake County, North Carolina. From approximately 1964 to 2005, Ward built, repaired, sold, and reconditioned electrical transformers at the Ward Transformer site. As a result of Ward's business operations, PCBs were released into the environment. Because PEC did business with Ward, it was one of approximately forty (40) companies EPA initially contacted when the Ward Transformer site was added to the Superfund National Priorities List in 2003. Ultimately, in September 2005 and despite its limited and infrequent dealings with Ward, PEC, along with three (3) other companies, entered into an Administrative Settlement Agreement and Order on Consent with EPA to implement and shoulder the full cost of the PCB cleanup and removal action at the Facility.

II. EPA's Remedial Action Objectives and Remedial Alternatives for OU1 Site

Generally, in selecting a remedy at Superfund sites, EPA's goal is to "eliminate, reduce, or control risks to human health and the environment."³ In the OU1 Proposed Plan EPA articulated the following three (3) Remedial Action Objectives:

- Eliminate or minimize any potential risks to human health or the environment due to consumption of contaminated fish from Brier Creek, Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek, by reducing PCB concentrations in fish to regulatory or risk-based levels;
- Eliminate or minimize any potential risks to human health or the environment due to direct contact with contaminated sediments in Reaches B, C, and D and Lower Brier Creek by reducing PCB concentrations in sediments to regulatory or risk-based levels; and
- Minimize any potential downstream migration of PCB-contaminated sediments.

In order to achieve these Remedial Action Objectives, EPA considered five (5) Remedial Alternatives in its OU1 Proposed Plan. The following is a brief summary of each Remedial Alternative:

Alternative 1 — No Action. EPA is required to consider the No Action alternative pursuant to the remedy evaluation and selection process set forth in 40 C.F.R. § 300.430. Under the No

Action alternative, no remedial actions would be implemented at the OUI Site and existing site conditions would not be subjected to any active remediation or institutional controls. As would be the case for all of the Remedial Alternatives, the No Action alternative would include a review of the remedy every five (5) years for thirty (30) years, as required by the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA" or "Superfund").⁵

Alternative 2 — Institutional Controls. Under this alternative, fish consumption advisories and appropriate signage would continue in effect with additional and related public outreach efforts to reduce the potential risks to human health through fish consumption.

Alternative 3 — MNR and Institutional Controls. In addition to implementing the institutional controls set forth in Alternative 2, periodic monitoring of sediments and fish sampling would be conducted over time while allowing naturally occurring processes to contain and/or reduce the bioavailability or toxicity of contaminants in media, thereby reducing any potential risk to human health and/or ecological receptors.

Alternative 4 — Excavation and Off-Site Disposal of Sediments in Reaches B C D. and Lower Brier Creek and MNR in Brier Creek Reservoir. Lake Crabtree and Lower Crabtree Creek; and Institutional Controls. This alternative generally involves implementation of

Alternative 3 plus (i) conducting pre-excavation sampling to accurately delineate the limits of excavation areas in Reaches B, C, D and Lower Brier Creek; (ii) conducting a mussel survey to determine if threatened or endangered species of mussel are present in areas selected for excavation; (iii) excavation and appropriate off-site disposal of sediments from Reaches B, C, D, and Lower Brier Creek; and (iv) post-excavation site and stream restoration work.

Alternative 5 — Excavation and Off-Site Disposal of Sediments in Reaches B, C, D, and Lower Brier Creek; Excavation/Dredging of Sediments in Brier Creek Reservoir and Lake Crabtree; Off-Site Disposal of Sediments; MNR in Lower Crabtree Creek and Institutional Controls. This alternative generally involves implementation of Alternative 4 plus dredging and/or excavating sediments in Brier Creek Reservoir and Lake Crabtree with appropriate off-site disposal.

The EPA must consider nine (9) criteria when evaluating these Remedial Alternatives for the OUI Site. These evaluation criteria include the following:

1. Overall protection of human health and the environment;
2. Compliance with Applicable or Relevant and Appropriate Requirements ("ARARs");
3. Long-term effectiveness and permanence;
4. Reduction of toxicity, mobility, or volume of contaminants through treatment;
5. Short-term effectiveness;
6. Implementability;
7. Cost;
8. State acceptance; and

9. Community acceptance

Based upon its comparative analysis of the five (5) Remedial Alternatives using the above-referenced criteria, EPA concluded in the OUI Proposed Plan that its preferred alternative for the OUI Site is Alternative 4.

III. Discussion of Alternative 1 Alternative 2 and Alternative 3

PEC understands that EPA believes Alternative 1 (No Action) should not be implemented because it does not provide adequate protection to human health and the environment and would do little to address the environmental concerns in our community over PCB contamination from the Ward Transformer site. The Company further understands that EPA feels Alternative 2 (Institutional Controls), while it includes important institutional controls that must be continued and augmented as necessary (*i.e.*, fish consumption advisories, posting of signs and educational/community outreach programs, etc.), does not go far enough toward protecting human health and the environment because without implementation of any overall monitoring program, it will be nearly impossible to determine if and when any of the Remedial Action Goals for the OUI Site are achieved.

PEC agrees with EPA that implementation of Alternative 3 (MNR) likely would reduce any potential risk to human health and the environment over time through naturally occurring processes to contain and/or reduce the bioavailability or toxicity of PCB contaminated sediments along the OUI Site. The OUI Proposed Plan recognizes that MNR especially suitable for a site such as this where the main source of contamination will be removed." The implementation of an appropriate periodic monitoring program of sediments and fish sampling conducted over time will provide EPA, NCDENR, local governments and interested citizens with the technical data needed to determine when the Remedial Action Goals for the OUI Site are achieved, as well as when changes might be needed with respect to fish consumption advisories and other institutional controls, so as to eliminate or minimize potential risks to human health due to consumption of contaminated fish.

There are also benefits to the environment and ecological systems within the OUI Site by pursuing MNR, instead of undertaking the significant land-disturbing activities, dewatering and wetland/streambed/habitat disruptions associated with not only the excavation and dredging removal actions contemplated by Alternative 4 and Alternative 5 but also the construction of access roads and equipment storage and "lay down" areas needed to accomplish such removal actions. MNR typically involves no man-made physical disruption to the existing biological community, which may be an important advantage for some wetlands or sensitive environments where the harm to the ecological community due to sediment disturbance may outweigh the risk reduction of an active cleanup."

IV. PEC Agrees with EPA that Alternative 5 Should Not Be Implemented

Alternative 5 generally involves the complete implementation of Alternative 4 (discussed in more detail below), plus dredging and/or excavating sediments in Brier Creek Reservoir and Lake Crabtree with appropriate off-site disposal. PEC fully agrees with EPA's assessment that Alternative 5 is not appropriate for the OW Site for several reasons.

First and foremost, the significant and widespread environmental impacts resulting from large-scale dredging and excavation operations in and around Brier Creek Reservoir and Lake Crabtree far outweigh the minimal additional environmental benefits Alternative 5 may present. "The [EPA] project manager should consider the impact of habitat loss or alteration in evaluating a dredging or excavation alternative. . . . [i]t is important to determine whether the loss of a contaminated habitat is a greater impact than the benefit of providing a new, modified but less contaminated habitat."⁹ EPA correctly finds in the OUI Proposed Plan that large-scale excavation/dredging operations in Brier Creek Reservoir and Lake Crabtree "will disturb or destroy benthic and other aquatic biota [and avian biota] and habitats in the reservoir and the lake".

The adverse impacts to the environment and existing ecosystems associated with implementation of Alternative 5 are not simply confined to the beds of Brier Creek Reservoir and Lake Crabtree. Excavation, dredging and necessary dewatering work would require that large sections of wooded areas and wetlands be completely destroyed and/or filled. Neighboring wetlands, floodplains, old-growth timber, riparian buffers, Lake Crabtree County Park, and other nearby properties also likely will be destroyed, disturbed, or otherwise adversely impacted either by dewatering activities, construction activities (including construction of access roads and utilization of temporary construction easement areas for truck/vehicle parking and equipment storage areas etc), land-clearing activities, increased truck traffic, dust, and noise. EPA also has correctly noted that the dredging/excavation activities of Alternative 5 could adversely impact threatened bald eagles within the Brier Creek Reservoir and Lake Crabtree for foraging and breeding." Re-establishing these sensitive habitats to pre-existing conditions over the long term may be extremely difficult with no guarantee that the threatened bald eagle population will return even after restoration work is completed. The degree and extent of impacts on adjacent and nearby wetlands are unknown in the event Brier Creek Reservoir and Lake Crabtree were completely drained in order to perform the remedial excavation and dredging work contemplated under Alternative 5 (i.e. would significant wetlands and other sensitive water-dependent habitats also be drained and lost?).

The environmental benefits from excavation and dredging of Brier Creek Reservoir and Lake Crabtree appear to be very minimal because no sediment sampling in the reservoir and lake has revealed PCB concentrations above EPA's cleanup level and remedial goal. EPA has determined that the chemical-specific ARAR for PCB concentrations in sediment for the OUI Site is 1.0 milligram per kilogram or 1.0 ppm. This level of cleanup is intended to protect human health from "direct exposure to PCBs in soil and sediment." The PCB sampling data collected for sediments in Brier Creek Reservoir and Lake Crabtree has not revealed any PCB levels exceeding EPA's remedial goal of 1.0 ppm.

Surface water samples collected at Lake Crabtree and Brier Creek Reservoir and soil samples collected at recreational areas within the Lake Crabtree floodplain have not detected PCBs in any of the samples collected.³ Moreover, the maximum PCB concentration detected in sediments in Lower Brier Creek (extending from the Brier Creek Reservoir to Lake Crabtree) is 0.28 ppm, well below EPA's remedial goal. For purposes of Alternative 5, due to the fact

that PCB levels detected in Brier Creek Reservoir and Lake Crabtree "already are in the low ppm range," it is assumed in the OUI Proposed Plan that all of the sediments in Brier Creek Reservoir and Lake Crabtree would have to be removed to ensure that the availability of very low PCB levels is completely eliminated for ecological receptors:⁴ PEC believes that the low levels of PCB concentrations found in Brier Creek Reservoir, the floodplain around Lake Crabtree and Lower Brier Creek (that feeds into Lake Crabtree) does not support implementation of such an invasive and physically destructive remedy as is proposed in Alternative 5 (or as discussed more fully below in Section V, EPA's proposal to include excavation and dredging of Lower Brier Creek in Alternative 4).

Excavation and dredging work in Brier Creek Reservoir and Lake Crabtree could mobilize and spread the low levels of PCB contamination through re-suspension:⁵ EPA also has acknowledged that if dredging is used, due to technological limitations, residuals will remain, "including low levels of PCB contamination in the biologically active sediment zone" and that "dredging residuals could impact fish concentrations in the reservoir and lake for many years after completion of the dredging operations."" There is always a level of uncertainty about the ability of excavation and dredging techniques to achieve their goals because it is difficult to estimate not only the possible impacts from re-suspension, but also the residual contamination that will inevitably remain following removal.

Second, completion of the EPA-approved source removal action at the Facility (including Reach A), together with the implementation and completion of the remedial actions contemplated in Alternative 4 for Reaches B, C, and D, should effectively eliminate human health risks from contaminated sediment and prevent any future down-gradient migration of PCBs from the Ward Transformer site into the Brier Creek Reservoir, Lower Brier Creek, and Lake Crabtree. Thus, it can reasonably be expected that the low levels of PCBs in Brier Creek Reservoir and Lake Crabtree will continue to decrease after the PCB contamination source has been addressed at the Facility and in Reaches B, C, and D. MNR is especially suitable for these down-gradient areas of the OW Site, where the main source of PCB contamination at the up-gradient Facility and Reach A is already being removed.

As discussed in further detail in Section V below, some periodic monitoring of aquatic biota in Lower Brier Creek, Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek is appropriate and will provide EPA, NCDENR, local governments, and interested citizens with the assurance and technical data needed to determine when changes may be needed with respect to fish consumption advisories and other appropriate institutional controls so as to eliminate or minimize any potential risks to human health. Potential risks to human health at the OUI Site are based, in part, on the consumption of fish from Brier Creek Reservoir, Lake Crabtree, and, to a lesser extent, Crabtree Creek. To minimize these risks, since December 2003, the North Carolina Department of Health and Human Services has issued several fish consumption advisories regarding certain waterways along the OUI Site. In November 2005, Wake County adopted a policy of "catch and release only" fishing for Lake Crabtree and Crabtree Creek (below Lake Crabtree) and has conducted other outreach efforts advising the public to conduct catch-and-release fishing.

Third, the implementation of Alternative 5 is much more complex and difficult than

Alternative 4 and will require considerably more time. Due to the sheer complexity, scope and increased permitting and consultation efforts necessitated by Alternative 5 it would do very little in terms of decreasing the actual amount of time required for fish tissues to attain acceptable health-based concentrations of PCBs--one of EPA's Remedial Action Goals for the OU1 Site. Under Alternative 4, EPA projects that fish in Lake Crabtree would attain acceptable PCB concentrations in approximately nine (9) years and fish in Brier Creek Reservoir would attain acceptable PCB concentrations in approximately fourteen (14) years. Under Alternative 5 EPA projects that fish in Lake Crabtree would attain acceptable PCB concentrations in approximately eight (8) years after excavation and dredging work, and fish in Brier Creek Reservoir would attain acceptable PCB concentrations in approximately twelve (12) years after excavation and dredging was completed. When compared with Alternative 4 implementation of Alternative 5 at best, would reduce the projected period of time for fish tissue in Lake Crabtree to attain acceptable concentrations by only one (1) year and for fish tissue in Brier Creek Reservoir by only two (2) years. Therefore, EPA correctly noted in its comparative analysis of the short-term effectiveness of Alternative 4 and Alternative 5 that the removal of a larger amount of sediments does not necessarily correspond to a shorter amount of time to achieve cleanup goals. Given the many variables with respect to the planning, design, construction, permitting and consultation (including endangered/threatened species identification) associated with Alternative 5 it is reasonably conceivable that implementation and completion of Alternative 5 could actually result in it taking longer to achieve acceptable health-based fish tissue concentrations than what EPA projects under Alternative 4 through MNR implementation at Brier Creek Reservoir and Lake Crabtree.

Fourth, implementation of the excavation and dredging work under Alternative 5 will significantly compromise the natural flood control features afforded by the existing Brier Creek Reservoir, Lake Crabtree, and connected wetlands for several years. Without this natural flood control, stormwater runoff from significant rain events could cause or contribute to unanticipated flooding in neighboring areas, roads, and infrastructure. Lastly, Lake Crabtree probably would not be available for public recreational use (or subject to limited uses) for significant periods of time during the sediment removal process. Access and use of Lake Crabtree County Park also could be adversely impacted or curtailed.

V. PEC Requests EPA to Select Modified Alternative 4—Excluding Sampling and Excavation of Lower Brier Creek—As the Preferred Alternative for the OU1 Site

PEC requests that EPA select as the preferred alternative for the OU1 Site the following Modified Alternative 4. PEC's support of Modified Alternative 4 is predicated upon the fact that the ongoing EPA-approved removal action at the Facility (including Reach A) is removing virtually all of the PCB contamination. Together with future implementation of selective sediment removal actions in Reaches B, C, and D, these actions will address the human health risks associated with exposure to contaminated sediment and minimize any potential downstream migration of PCB-contaminated sediment. Thus, two of the three Remedial Action Objectives for the OU1 Site (*Le.*, eliminating or minimizing human health risks due to direct contact with contaminated sediment and minimizing potential downstream migrations of PCB-contaminated sediment) will be achieved upon successful completion of the removal actions at the Facility and Reaches B, C, and D.

The data collected from 2003-2007 during the EPA-led Remedial Investigation shows that no excavation or other disruptive sediment removal actions are warranted downstream of Reach D. Consequently, the significant, adverse ecological and environmental impacts generated by certain aspects of Alternative 4 can be minimized by eliminating Lower Brier Creek from Alternative 4. Although sediment samples in Reaches B C and D have shown PCB concentrations in excess of the 1.0 ppm cleanup level and remedial goal, no sample collected downstream of the Reaches is above the 1.0 ppm cleanup level. Furthermore, PCB concentrations in the OUI Site generally decrease as one moves further downstream. On the basis of this data, EPA should modify Alternative 4 such that no sediment removal actions will be required in Lower Brier Creek, which is downstream from Reach D.

Sufficient representative sampling work already has been conducted in the OUI Site areas located downstream from Reach D. For example, in Brier Creek Reservoir, there has been a sample collected approximately every 25 acres. In Lake Crabtree, a sample has been collected approximately every 23 acres. Neither area has shown any PCB concentrations that exceed the EPA's 1.0 ppm cleanup level and remedial goal. As stated previously, in light of this data, the EPA has appropriately determined that excavation and dredging activities in Brier Creek Reservoir and Lake Crabtree are not warranted. That same approach and reasoning is equally applicable to Lower Brier Creek. At Lower Brier Creek, even though the sampling density has been much higher than that in the reservoir or lake, the sampling results have shown lower PCB concentrations. In Lower Brier Creek, there has been a sample collected approximately every 2.25 acres, with the highest PCB concentration detected being 0.28 ppm, well below the 1.0 ppm EPA cleanup standard.

With particular regard to dredging or excavation alternatives, EPA policy directs its project managers to "consider the impact of habitat loss or alteration in evaluating a dredging or excavation alternative." Therefore, the benefits of reducing contamination along Lower Brier Creek (which already is at levels below EPA's remedial goal) must be weighed against the potential harm to the environment and the alteration or loss of habitat, including habitat for endangered or threatened species. The environmental benefits to be gained from excavation and dredging of Lower Brier Creek appear very minimal because no sediment sampling in Brier Creek Reservoir or Lower Brier Creek has revealed concentrations of PCBs above EPA's remedial goal of 1.0 ppm. Excavation, dredging, and dewatering activities to remove sediments from Lower Brier Creek will disturb or destroy benthic and other aquatic biota and habitats in Lower Brier Creek and cause sections of wooded areas and wetlands to be completely destroyed and/or filled. Neighboring wetlands, floodplains, old-growth timber, and riparian conditions will also likely be destroyed, disturbed, or otherwise adversely impacted either by dewatering activities, construction activities (including construction of access roads, truck/vehicle turnarounds and parking, equipment storage areas, etc.), land-clearing activities, increased truck traffic, dust, and noise. It is not known what impacts would occur on wetlands adjacent to Lower Brier Creek if the streambed has to be re-routed to complete the removal work.³ EPA policy counsels leaving a wetland intact when it is "functioning properly and is not acting as a contaminant source to the biota and the surrounding area."

Additionally, the scope of the sampling associated with MNR in Alternative 4 should be modified to exclude additional sediment sampling once all sediment at the Facility and the OUI Site is remediated to the 1.0 ppm cleanup level. The OUI Proposed Plan states that "Mike Alternative 3 Alternative 4 includes periodic monitoring of sediments and aquatic biota (fish sampling) associated with MNR." While PEC agrees that MNR is an important element of Alternative 4 the scope of MNR activities should be modified from that proposed in Alternative 3 to account for the active removal of sediments at concentrations greater than 1.0 ppm. Sediment sampling for PCB analysis, as part of the MNR activities following implementation of Alternative 4 is unnecessary and inconsistent with the Remedial Action Objectives for the OUI Site. Upon removal of all sediments with PCB concentrations greater than 1.0 ppm, the remaining risk is associated with the consumption of contaminated fish. The best way to assess the degree of contamination in fish is to sample fish tissue. To continue to test sediment samples for PCBs will not provide appropriate data for the purpose of monitoring the natural recovery of the fish.

VI. Conclusion

80. After careful review, PEC believes that EPA should implement a modified version of Alternative 4. Specifically, the Company believes that the best approach is a remedy that includes the beneficial aspects of Alternative 3 and the selective sediment excavation in Reaches B, C, and D. The data does not support sediment excavation in Lower Brier Creek. PEC's view is based primarily on the absence of PCB contamination in Lower Brier Creek above the 1.0 ppm cleanup level and remediation goal. Given that there is no basis for removing soils in that section of the OUI Site, it is not worth the harm to these sensitive environmental areas that would inevitably result from such disruptive activity. There also will be no need for additional sediment sampling in the OUI Site once all residual contamination is removed. Because the implementation of a modified Alternative 4 will achieve two of the three Remedial Action Objectives, the only remaining objective will be to eliminate or minimize human health risks associated with consumption of contaminated fish. To this end, PEC agrees with EPA's position that MNR and institutional controls are especially suitable and will be effective in monitoring PCB concentrations in fish tissue. Once this remedy is complete, we anticipate that all risks to human health and the environment resulting from Ward's operations will have been fully addressed.

EPA Response: EPA does not agree with PEC's request to modify the proposed alternative and reduce monitoring requirements. In fact, based on other comments received and further analysis of the existing data, EPA has decided to require that floodplain soil samples be collected as part of the pre-excavation sampling program component of the Selected Remedy. If the soil sample results show PCB concentration above the 1 ppm remedial goal, these areas will also require excavation.

A conservative decision was made when EPA decided to include excavation along Lower Brier Creek as part of the Alternative 4 actions. The Selected Remedy requires additional sampling from lower Brier Creek prior to any excavation activities. If results from the pre-remediation sampling activities along Lower Brier Creek confirm that sediment and floodplain soil levels are below the 1 ppm remedial goal, no excavation will be required along Lower Brier Creek.

During the remedial design, specific details of the sampling requirements for the pre-excavation activities, MNR program, and the periodic monitoring of sediment and aquatic biota will be finalized. Monitoring will be required in all areas where fish advisories exist and fish data show PCB concentrations in fish above the remediation goal of 0.05 ppm.

IV. TRANSCRIPT OF THE AUGUST 14, 2007 PUBLIC HEARING

Attachment 1 of this report includes a copy of the transcript.

ATTACHMENT 1

1 ENVIRONMENTAL PROTECTION AGENCY
2 SUPERFUND PROPOSED PLAN
3 WARD TRANSFORMER SITE OPERABLE UNIT 1
4
5
6
7
8

9 - - -
10 TRANSCRIPT OF PUBLIC MEETING
11 - - -

12
13 ORIGINAL
14
15
16

17 DATE: August 14, 2007
18 TIME: 7:03 p.m. - 8:16 p.m.
19 PLACE: Raleigh, North Carolina
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21
22
23
24
25

A. WILLIAM ROBERTS, JR., & ASSOCIATES

1 MR. CAMPBELL: I think we're about ready to
2 get started if everyone wants to take a seat. My
3 name is Rich Campbell. I'm a section chief of the
4 Environmental Protection Agency. I think I've met
5 many of you at our meetings before, but I wanted to
6 open the meeting up and kind of give you a little
7 bit of information about what we're going to do
8 here.

9 This is a more formal meeting than I think
10 just about all the meetings we've had in the past
11 in that we're actually taking comments for the
12 record. We have a court reporter who will be
13 taking a transcript of comments that are made. We
14 will try to respond to any kinds of questions you
15 have while we're here, but there will also be a
16 formal responsiveness summary that will come out
17 later. So there will be a written response to
18 issues that are raised at this meeting.

19 Let me now introduce Angela Miller, who is our
20 community involvement coordinator. I think you've
21 probably met her before. She's going to say a few
22 more words about the logistics of the meeting.

23 MS. MILLER: I don't really need a microphone,
24 but, as Rich mentioned, there is a comment period
25 that's in effect right now. It actually started

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1 August the 6th and it originally was supposed to
2 end on September the 4th, but the Neuse Riverkeeper
3 Foundation has asked for an extension. So we're
4 giving a 30-day extension on the comment period.
5 So we will close that out on October 4th. So you
6 can either e-mail your comments to Luis or you can
7 mail them. They just have to be postmarked by
8 October the 4th.

9 Luis is going to start out with a presentation
10 and then after his presentation, we will have
11 question and answers or comments. As Rich said, we
12 do have a court reporter that's transcribing. So
13 at the end of the Q and A, I'm going to walk around
14 with the mic. If you will state your name first.
15 If it's unusual, if you will spell it so we can
16 have that on record.

17 The other thing that we ask is if you have a
18 question, if you could just hold it to the end,
19 that way Luis can get through the presentation and
20 then we will definitely have a question and answer
21 period.

22 And now I'll turn it over to Luis Flores,
23 project manager of the Ward Site.

24 MR. FLORES: Can you hear me? Can you hear
25 me? Higher, okay.

A. WILLIAM ROBERTS, JR., & ASSOCIATES

1 Well, welcome, everybody. I guess first I
2 just want to say thank you for taking the time to
3 come here tonight. Tonight we're going to be
4 presenting the proposed plan for the Ward
5 Transformer Site, Operable Unit 1, Operable Unit 1.

6 Let me start by giving you an outline of my
7 presentation. I'm going to start by giving a brief
8 overview of the Ward Transformer Site. Then I'm
9 going to talk about the scope and role of this
10 proposed plan that we're presenting tonight.
11 That's where I'm going to explain to you why we're
12 calling it Operable Unit 1 and what Operable Unit 1
13 includes. Then I'm going to give you some general
14 findings about the remedial investigation, mainly
15 the main conclusions of the investigation.

16 This was a very complicated and long
17 investigation, a lot of samples were collected.
18 There is a whole remedial investigation report with
19 all the information. And that report is housed in
20 the site repository located at the North Raleigh
21 library here in Raleigh. So you're welcome to go
22 over there and look at the whole report.

23 Then I'm going to talk about remedial action
24 objectives or the goals that we're planning to
25 achieve with this clean-up plan that we're

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1 proposing tonight. Then I'm going to present the
2 remedial action alternatives that we developed to
3 address those or trying to achieve those remedial
4 action objectives and the evaluation criteria that
5 we use in the Superfund program to look at those
6 alternatives. Then I'm going to present to you
7 EPA's preferred alternative to clean up the Ward
8 Transformer Site Operable Unit 1.

9 Then next steps I will let you know what to
10 expect after this meeting and then we'll get into
11 the questions. And, like Angela said, if you take
12 notes of your questions, we'll try to address them
13 at the end of the presentation.

14 The facility, as many of you know, is located
15 very close to the Raleigh-Durham Airport here in
16 Raleigh, North Carolina. It's about 11 acres.
17 It's owned by Ward Transformer Company. The
18 facility, they've been in operation since the '60s.
19 Actually they stopped operation in 2005. Over
20 there in that facility, they rebuilt, repaired,
21 reconditioned and sold electrical transformers.

22 We conducted, EPA conducted a very complicated
23 remedial investigation. A lot of samples were
24 collected. The samples included soil samples,
25 sediment samples, surface water samples,

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1 groundwater samples and fish. The investigation
2 covered a very wide area, which includes the Ward
3 Transformer facility itself, some properties around
4 the Ward Transformer facility and about 30 miles of
5 waterways down gradient from the facility.

6 These maps show what I'm calling the study
7 area, the areas where we collected samples. If you
8 look up here, that's the Ward Transformer Site,
9 Lake Crabtree, the Neuse River over here, Crabtree
10 Creek. Let me give you a few definitions that
11 we're using in this project. We divided the site
12 in different sections to be able to identify the
13 areas that we were going to collect samples. You
14 know, the Ward Transformer facility itself, I guess
15 that's pretty clear. As we start going down
16 gradient from the Ward Transformer facility, we get
17 into the different water bodies down gradient. The
18 first one that we encounter is a tributary to
19 Little Brier Creek.

20 For study purposes, we divided the tributary
21 in three sections. We called the first section
22 Reach A, second section Reach B, and the third
23 section Reach C. After Reach C there is another
24 section that we call Reach D. That Reach D is
25 actually Brier Creek -- I'm sorry, Little Brier

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1 Creek itself.

2 So we got the tributary here divided in three
3 sections and then Brier Creek here. As we go down,
4 we found the Brier Creek Reservoir, then Lower
5 Brier Creek, Lake Crabtree and then all this is
6 Crabtree Creek all the way discharging into the
7 Neuse River. So those were the areas where samples
8 were collected out of the study area.

9 So that was the whole picture, the study area.
10 But in terms of what we're addressing tonight, we
11 are addressing, like I said earlier, Operable Unit
12 1. And what Operable Unit 1 includes, it's
13 basically everything down gradient from Reach B,
14 including Reach B. Reach B and everything down
15 gradient, B, C, D, reservoir, the lake, and
16 Crabtree Creek.

17 Operable Unit 2 is actually the areas up
18 gradient of Reach B and Reach A and the Ward
19 Transformer facility. Those areas are the subject
20 of the ongoing removal action. What we're going to
21 be discussing tonight is Operable Unit 1 and the
22 proposed plan, or the clean-up plan for Operable
23 Unit 1.

24 As expected, the main contaminants of concern
25 were PCBs, or polychlorinated biphenyls. They were

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1 detected in relatively low concentrations in the
2 Operable Unit 1 areas. When I say "relatively low
3 concentrations," I guess I want to define what that
4 means. As part of our risk assessment, we
5 determined that for human exposure -- for human
6 exposure having direct contact with sediment, one
7 part per million or one milligram per kilogram will
8 be a protective number for sediment. Anything
9 above could be considered having an unacceptable
10 risk.

11 So one part per million is kind of like a
12 number that has also been used many times in other
13 site clean-up goals and, like our risk assessment
14 says, is the number we're going to use here for
15 direct contact or human exposure. And when I say
16 "relatively low," it's because in the study -- in
17 the Operable Unit 1 areas, most concentrations are
18 below one part per million. If we make an average
19 of all the samples that were collected, the average
20 concentrations will be below one part per million.

21 There is some of those reaches that has sample
22 points above one part per million. I think the
23 higher one in the Operable Unit 1 area is 4.2 parts
24 per million in Reach D. But Lake Crabtree, the
25 reservoir, and some of the other -- well, Lake

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1 Crabtree actually has all the concentrations below
2 one part per million, the same in the reservoir.
3 And, like I said, Reach D has the highest one,
4 which is 4.2. I'll have a map later showing the
5 results so we can look at those.

6 Also, PCBs were not detected in any of the
7 sediments down gradient from Lake Crabtree. So
8 Crabtree Creek all the sediments were non-detected
9 for PCBs.

10 In addition to all the samples that we
11 collected, sediment and fish and groundwater and
12 surface water, we had a meeting with a group of
13 stakeholders here in Raleigh and we put together a
14 sampling plan. And we collected additional samples
15 to address some specific concerns from the
16 community. Those samples -- in addition to more
17 sediment samples, we also collected soil samples
18 from areas around the Lake Crabtree and Cedar Fork
19 athletic fields. None of those samples -- all of
20 those samples were non-detect. None of the samples
21 show any PCBs. So the recreational areas around
22 Lake Crabtree showed no PCBs. These are the same
23 with the surface water in Lake Crabtree. There was
24 no PCBs detected in surface water.

25 This map -- I'm going to now show the sample

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1 locations, sediment sample locations in the areas
2 that are part of Operable Unit 1. I'm going to
3 start from the further down gradient part from the
4 side, like the Neuse River. This is the Neuse
5 River over here. And I'm going to start going up,
6 getting closer to the site. This first map
7 basically shows Crabtree Creek. And the places
8 where we collected samples, I don't know if maybe
9 the people in the back can see that, but all those
10 samples points show non-detect PCBs in the
11 sediments.

12 The next figure is going to move further up
13 gradient for Crabtree Creek and is going to get
14 into Lake Crabtree. When we look at Lake Crabtree
15 here, we collected a lot of sediment samples from
16 the lake. This sample over here is the highest,
17 the highest level that we detected at the lake and
18 it's .48 parts per million. And can you see those
19 numbers in the back? Should I make it bigger?
20 Point 48 is the highest number. There is a bunch
21 of non-detects.

22 We got here .18, .12. As we move further up
23 into Brier Creek, Brier Creek is over here. This
24 that we see over here is the down gradient part of
25 Brier Creek Reservoir. We got on Brier Creek a

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1 non-detect, .28. And as we move further into Brier
2 Creek reservoir, .11, .094. So, as you see, a lot
3 of the sediments are -- the concentrations are,
4 like I said, relatively low. They're low enough
5 for human exposure, but they might not be low
6 enough for ecological receptors and that's where it
7 becomes a bigger concern is the ecological
8 receptors and the fish. But in terms of human
9 exposure, they're relatively low. Actually, they
10 are low.

11 As we keep moving further up, these three
12 squares here are Reach D, C and B and my next
13 figure is going to give us a closeup of Reach D.
14 Let's see if I can make it a little bigger. Not
15 big enough. As we go up, .38, .11, .029. This is
16 Reach D. This is where we have the highest
17 sediment concentration in the whole Operable Unit
18 1, which is this point SD-32 with 4.2 parts per
19 million PCBs. As we keep going up, .023.

20 The next figure will be Reach C and here they
21 are higher than one part per million, also 1.9 --
22 I'm sorry, 1.3, .043, but in general, they are
23 below one. There is some hits above one,
24 especially in the reaches as we get closer to the
25 site.

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1 Reach C and Reach B, which is where Operable
2 Unit 1 starts, .93, there is a .26 here, .31, .36,
3 2.1. So those are sediment concentrations, PCBs in
4 sediments that were detected in the Operable Unit 1
5 area.

6 In addition to sediments, we also collected
7 fish samples, like I said. And we used those
8 samples to determine ecological risk and human
9 health risk due to ingestion of fish. All those
10 samples were sent to the State for them to review
11 and they did calculations and issued fish
12 advisories that are in place right now. The fish
13 advisories are for Little Brier Creek, Brier Creek
14 Reservoir, Lake Crabtree and Crabtree Creek. For
15 the Little Brier Creek and all the way to Brier
16 Creek Reservoir, they are for no consumption of
17 fish. The down gradient at Lake Crabtree and down
18 gradient they are for limited consumption, no more
19 than one meal a month. EPA, the State and Wake
20 County have worked together and all those areas are
21 posted with signs showing advisories.

22 So let me talk now about what are the
23 objectives or the goals that we're trying to
24 achieve with this proposed plan. The first goal
25 will be to eliminate or minimize any potential

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1 risks to human health or the environment due to
2 consumption of contaminated fish from some of these
3 areas by reducing PCB concentrations in fish to
4 regulatory or risk-based levels. Basically, what
5 action can we take so that we can get
6 concentrations in fish low enough so that we don't
7 have to have fish advisories. That will be the
8 first objective.

9 The second objective would be eliminate or
10 minimize any potential risks to human health or the
11 environment due to direct contact with contaminated
12 sediments in Reaches B, C, D, Lower Brier Creek by
13 reducing PCB concentrations in sediments to
14 regulatory or risk-based levels. That is what I
15 said earlier that the risk assessment shows that
16 one part per million is a level that shows as a
17 clean-up goal for preventing human exposure from
18 direct contact to contaminated sediment.

19 And the third objective will be minimize any
20 potential downstream migration of PCB contaminated
21 sediments. So those are the objectives and then we
22 developed alternatives to try to address those
23 objectives.

24 The first alternative that was developed is a
25 no action alternative. Basically assumes no

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1 action. It doesn't even assume that there are fish
2 advisories in place. This no action alternative is
3 like a baseline alternative.. It's an alternative
4 that the Superfund law requires that we evaluate.
5 So that serves as a comparison with all the other
6 alternatives. The only thing that is going to be
7 done in this alternative is to conduct a five-year
8 review. Five-year review is a review that EPA
9 needs to conduct as part of the Superfund law also
10 when contamination is left on site. So if there is
11 no action, the determination is, you know, it's
12 going to be left on site. So we're going to have
13 to do reviews every five years. And then the
14 estimated cost is \$332,000. And that's the cost of
15 the five-year review every five years for 30 years.

16 The second alternative is institutional
17 controls. Institutional controls will include
18 continue the existing North Carolina fish
19 consumption advisories and signs, together with
20 educational and community outreach program to
21 inform the community about the fish advisories and
22 give them all that information. It also includes
23 the five-year review. And the estimated cost for
24 that alternative is \$476,000.

25 Alternative 3 includes the same institutional

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1 controls that the previous alternative did,
2 Alternative 2, but in addition this alternative
3 includes a very important component that
4 Alternative 2 did not have, which was monitor
5 natural recovery. Monitor natural recovery will
6 consist of monitoring sediments and fish to get an
7 understanding of how nature is taking care of that
8 contamination and is preventing for the
9 contamination to be available for the ecological
10 receptors. I guess this alternative assumes that
11 because the main source of the contamination, which
12 is the Ward Transformer facility and Reach A, have
13 been cleaned up and they're going to be cleaned up,
14 this alternative assumes that eventually, probably
15 in a long period of time, nature is going to take
16 care of that low level contamination that is in
17 place now and it's going to be remediated by
18 itself. The estimated cost of that alternative is
19 \$2,247,000.

20 Alternative 4 -- there are five alternatives
21 by the way, so just one more after this one.
22 Alternative 4 has the same components of
23 Alternative 3, but in addition the same components,
24 the fish advisories, the community outreach
25 programs, five-year reviews and monitor natural

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1 attenuation, but in addition it includes excavation
2 on Reaches B, C, D and Lower Brier Creek. And what
3 that does is that those were -- especially B, C and
4 D were the reaches that had contamination above one
5 part per million. So by excavating those and
6 taking out the sediments with above one part per
7 million, we will expedite -- that could be
8 considered a minor source than the Ward Transformer
9 facility and Reach A. And by excavating those and
10 removing those from there, it will expedite the
11 natural recovery of all the other areas.

12 Based on modeling that has been conducted, if
13 those reaches are excavated, we believe that Brier
14 Creek Reservoir, that the fish in Brier Creek
15 Reservoir will achieve a clean-up goal that will
16 allow the State and EPA to remove the fish
17 advisories. And for Lake Crabtree it will take
18 about nine years for the fish to reach PCB
19 concentrations that will be low enough that will
20 not require fish advisories. The estimated cost
21 for this alternative is \$4,989,000.

22 Alternative 5 includes all the components of
23 Alternative 4, but in addition -- oh, I forgot to
24 mention -- can we go back to Alternative 4? I
25 forgot to mention that before the excavation of

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1 Reaches B, C, D and Lower Brier Creek, there is
2 going to be -- we're going to have to conduct
3 sampling to define what are the areas that need to
4 be excavated, where the sediments with
5 concentrations above one part per million are. And
6 also we're going to have to do an endangered
7 mussels study to determine if there are endangered
8 mussels in that area.

9 So Alternative 5 includes everything, all the
10 components that Alternative 4 has and in addition
11 it has dredging or excavation of sediments in Brier
12 Creek Reservoir and Lake Crabtree. This will be a
13 very complicated alternative. At this point we can
14 not say if those sediments will be dredged or
15 excavated dry. I guess the difference between
16 dredging and excavation is one is dry, the other
17 one is done wet. We would have to conduct
18 additional studies to determine if any of those is
19 appropriate for the specific conditions of those
20 areas.

21 Let's say that excavation is not -- is not
22 feasible. Dredging, you know, it's also pretty
23 complicated. And in this case that we have really
24 low concentrations already in this area, Brier
25 Creek Reservoir, Lake Crabtree, it will be very

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1 difficult to determine success that we will get the
2 specific areas that need to be excavated. It will
3 be a very complicated operation.

4 So after all that excavation is done, there
5 will be a site and stream restoration. This
6 alternative estimates that the fish in these areas
7 will achieve the levels for -- the levels that
8 there is not going to be any need for fish
9 advisories 12 years in the Brier Creek Reservoir
10 and eight years in Lake Crabtree.

11 If we go back one slide, Alternative 4 was for
12 14 for Brier Creek Reservoir and nine for Lake
13 Crabtree. So this alternative, based on the
14 modeling, shows one year more for Lake Crabtree and
15 two years more for Brier Creek Reservoir than
16 Alternative 5. But, of course, Alternative 5 will
17 take a lot of planning and coordination between
18 many agencies, the county, a lot of agencies. So
19 the planning will -- could take a lot longer than
20 Alternative 4.

21 The estimated cost for this alternative is
22 \$540 million -- almost \$541 million. This is an
23 estimate, you know. That cost most likely will
24 change after some of the studies that I mentioned
25 are conducted and some of the decisions are made.

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1 Those decisions would be made -- if this
2 alternative is selected, those decisions would be
3 made in the remedial design, which would be after
4 the regular decision. Five hundred and
5 forty million dollars.

6 After we develop those alternatives, we use
7 the Superfund evaluation criteria, which basically
8 takes every alternative and looks at all these nine
9 points. Overall protectiveness of human health and
10 the environment. Does the alternative protect
11 human health and the environment? Does it comply
12 with appropriate regulations? Is it effective in
13 the long-term? Is it permanent? Does it achieve
14 reduction of the toxicity, mobility or volume using
15 treatment? Is it effective in the short term? Is
16 it possible to be implemented? The cost, State
17 acceptance and community acceptance.

18 I'm not going to go into the specific
19 evaluation of this alternative, but the proposed
20 plan basically -- which we mailed to the people in
21 the mailing list and there is also copies outside
22 at the table in front of the room -- basically has
23 a summary of that evaluation of each alternative on
24 page eight and on. And this is, again, this
25 proposed plan is a summary. The feasibility study

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1 report includes the whole -- all the information
2 regarding this evaluation. And that report is also
3 available in the information repository at the
4 North Raleigh library.

5 So based on the information that we have at
6 this time, EPA and the State of North Carolina
7 believe that Alternative 4 provides the best
8 balance and trade-off of all the alternatives with
9 respect to the criteria that we have to look at.
10 And that's the criteria that is explained in the
11 proposed plan and the FS. So EPA is proposing
12 Alternative 4 as the proposed plan to be used to
13 clean up contamination at Operable Unit 1 for the
14 Ward Transformer Site. Like I mentioned, the
15 estimated cost is \$4,989,000. We believe that we
16 can achieve levels in the fish in Brier Creek
17 Reservoir in nine years -- I'm sorry, in Lake
18 Crabtree in nine years and Brier Creek Reservoir in
19 14 years.

20 So what's to expect next? Tonight we
21 presented the proposed plan that's the preferred
22 alternative that EPA is proposing. It is the
23 alternative that is out for comment period -- for
24 comments during this comment period, together with
25 all the other documents that are housed in the

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1 information repository. I mentioned the RI and the
2 FS, but there are a lot of other documents there.
3 You're welcome to visit the library and look at
4 those and send comments.

5 As Angela mentioned, the comment period was
6 extended and now ends October 4th. We encourage
7 everybody to send comments. After those comments
8 are received, together with the comments that we
9 get here tonight, we'll put together a
10 responsiveness summary with comments or questions
11 and answers. After those comments are received and
12 evaluated, we use the responsiveness summary to
13 evaluate community acceptance.

14 If the agency believes that there is community
15 acceptance to this plan, we'll move forward and
16 issue the record of decision. The record of
17 decision is the document that will describe what
18 the proposed clean-up action that we want to take
19 at this site, specifically for Operable Unit 1.
20 There will be a record of decision for Operable
21 Unit 1. And after that we will start negotiation
22 with potentially responsible parties to see if they
23 will get into an agreement with EPA to implement
24 this plan and do this clean-up and pay for it.

25 After the agreement is reached, if an

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1 agreement is reached, we start the remedial design.
2 If there is an agreement, the PRPs will do the
3 design with EPA and the State and other agencies'
4 oversight. And, of course, they will require to
5 have approval. And then the action, the clean-up
6 action will be implemented after that.

7 Questions?

8 MR. JENKINS: Hello, my name is Matt Jenkins.
9 I'm with the Triangle Off-Road Cyclists. I have
10 two questions for you. The first one is the one
11 part per million. You mentioned that that's
12 acceptable for human exposure to the sediment. But
13 for what level exposure? Is that daily or weekly
14 exposure or would that be a yearly exposure?

15 MR. FLORES: That is, actually, the ten to
16 minus six number is actually a little higher than
17 one. That would be --

18 MR. YOUNG: Generally, one PPM is generally
19 protective of even a residential-type exposure
20 where you have daily contact with sediment. A
21 typical number used in soil clean-up, pretty well
22 established, it would be far and above any type of
23 reasonable upper bounds exposure that you would
24 receive, even in say a reed gatherer or something
25 like that.

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1 MR. JENKINS: Thank you.

2 MR. FLORES: He's Charlie Young. He's with
3 Weston Solutions. He helped putting together the
4 risk assessment and some other documents.

5 MR. JENKINS: Thank you. My second question
6 is with Alternative 5. What would be the impact to
7 recreation at Lake Crabtree Park and downstream
8 areas?

9 MR. FLORES: Yeah, I guess that level of
10 detail really have not been looked at. Those are
11 the things that we will look at during the remedial
12 design. But you can imagine that it will be a lot
13 of disruption to whatever activities that go on at
14 the park. And not only the park, just the areas
15 around it. I mean, this is -- it will be a big, a
16 big -- there will be a lot of activity going on
17 there. So yeah, it would disrupt pretty much the
18 whole area.

19 MR. JENKINS: Thank you.

20 MS. ROBERTSON: I'm Deborah Robertson. And I
21 had a question about the monitoring natural
22 recovery. It said in the alternatives that have
23 that in there it said that there is a periodic
24 monitoring of the sediments. What does that mean?
25 Does that mean yearly or every five years with the

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1 plan?

2 MR. FLORES: Yeah, I guess the details of that
3 will also be part of the remedial design. I guess
4 I would say that probably we will do yearly.

5 MR. MORAN: As I understand, yearly.

6 MR. FLORES: Yeah, yearly. Of course, to be
7 refined, you know, as needed depending on what, you
8 know, maybe for the first certain number of years
9 will be done with certain frequency. And then
10 depending on what we see, you know, it can change.

11 MR. deFUR: My name is Peter deFur. I'm the
12 technical advisor for the Neuse Riverkeeper on this
13 project and I have several questions. One of them
14 has to do with a couple of alternatives that
15 weren't discussed. One of them being treatment of
16 the sediments in place, referred to as in situ
17 treatment. There is some new technologies and new
18 procedures that have been developed recently and I
19 didn't see any discussion of those.

20 And then the other alternative would be a
21 hybrid between four and five or a consideration of
22 doing something active in terms of dredging or
23 excavation in Brier Creek Reservoir and not
24 Crabtree Lake.

25 MR. FLORES: Lake Crabtree, uh-huh.

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1 MR. deFUR: Could you comment on those before
2 I ask two other questions?

3 MR. FLORES: I guess the first, the first
4 question would be that we really didn't look into
5 any other -- any other alternative that looked into
6 in situ treatment. We didn't look into any other
7 alternative. I think that may be due to the size
8 of these creeks probably would be maybe just easier
9 to excavate. But yeah, we didn't look at
10 alternatives that considers that.

11 MR. deFUR: Okay. And I guess the same thing
12 goes for dredging Brier Creek Reservoir, but not
13 the lake?

14 MR. FLORES: Right. Well, we -- well, on
15 Alternative 4 we're looking at dredging about --
16 Alternative 4 we're looking at dredging or
17 excavating anything above one part per million and
18 the reservoir doesn't have anything above one part
19 per million.

20 MR. YOUNG: This is Charles Young from Weston.
21 I think one of the other considerations is that
22 Brier Creek Reservoir is a very limited fishery.
23 The intent of the remediation is one that's largely
24 driven with human risk associated with fish
25 consumption, ecological risk with respect to

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1 high-level Piciformes like bald eagles and so forth
2 is not considered to be a driving risk. And, in
3 fact, remediation might in fact cause more problems
4 with respect to affecting their breeding, habitat
5 and their foraging range in those two water bodies.

6 So given that Brier Creek Reservoir is a lot
7 more inaccessible with respect to fishing because
8 of its proximity to the airport, the ownership of
9 the land around that, the focus really in our minds
10 should be to achieving remedial goals for Lake
11 Crabtree because it is such a widely used
12 recreational resource.

13 MR. deFUR: Yeah, the other two questions, one
14 of them has to do with other contaminants. You
15 mentioned that there was some other contaminants
16 and the documentation gives a list of some of the
17 other contaminants that were identified. And I
18 assume, and I'll be checking this in the documents
19 in my review, that there is a one-to-one
20 correspondence between the occurrence of PCBs and
21 the other contaminants because you wouldn't want to
22 remove a PCB laden sediment and leave in place one
23 that's laden with dioxins or heavy metals?

24 MR. YOUNG: Charles Young once again. What we
25 found, and you'll probably see this in your review

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1 of the RI documentation, that the concentrations of
2 PCB congeners and dioxins were essentially
3 co-located, which is not surprising in that they
4 would both have the same affinity for absorption of
5 fine sediments and would be expected to be found if
6 they derived from the same source, i.e. the Ward
7 Transformer facility. So, in essence, going after
8 the PCB laden sediment, it would be expected to
9 pull the dioxins out. Metals did not pose a
10 significant risk to either human or ecological
11 receptors.

12 MR. deFUR: I have one more question that has
13 to do with monitored natural recovery. I only had
14 a brief period to look at the feasibility study.
15 There isn't a lot of documentation on the
16 effectiveness of monitored natural recovery in
17 sites throughout the country. And my review of the
18 subject is that there isn't comprehensive
19 documentation for that procedure at any site around
20 the country. There is very limited description of
21 how well it works. And it depends upon either one
22 or both of two processes. One of them is
23 sedimentation that covers it up. So is there an
24 estimate that the sedimentation is sufficient to
25 cover it up, or some other biological process or

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1 physical process that's going to cause PCBs to
2 break down? I guess we're back to Charlie.

3 MR. YOUNG: In our evaluation, the modeling
4 that was done with respect to the time it would
5 take to achieve -- monitor the natural recovery was
6 predicated on only the sedimentation, the burial
7 and accounted for bioturbation and other physical
8 processes that would cycle some of the PCBs
9 currently in sediments up into the upper
10 biologically active sediment layer. We did not
11 take any credit for any reductions due to microbial
12 decay or weathering of PCBs in place.

13 MS. BACKUS: Hi, my name is Pat Backus. I've
14 worked a little bit with PCBs. In your
15 presentation you made a distinction between
16 dredging and excavation in the streams you're
17 talking about. During this excavating, are you
18 going to just reroute that for a while? How will
19 you determine when they're clean I guess?

20 MR. FLORES: The Alternative 4 considers
21 excavation --

22 MS. BACKUS: No, I mean three -- I'm sorry.

23 MR. FLORES: Dry excavation, rerouting the
24 sections of the streams and excavating dry.

25 MS. BACKUS: Also, when in relationship to the

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1 Operable Unit 2 will that be done? My concern is
2 that with my experience with them, you have a
3 potential of adding more into the system even
4 though you're doing the best you can in removing
5 them at the site.

6 MR. FLORES: You mean like what's going on
7 right now?

8 MS. BACKUS: Will that be finished by the
9 time --

10 MR. FLORES: I think by the time this kicks
11 in, that's going to be done.

12 MS. BACKUS: Okay. And just kind of on the
13 comment, I know that the degradation of PCBs by
14 degradation is a really slow process. And by even
15 just dredging them you're going to change the
16 environment so much that you're going to mess up
17 what's already in place.

18 MR. HUTCHINSON: Luis, can you tell us about
19 stream restoration, once you get through the
20 dredging whether that will be done in an
21 environmentally friendly way?

22 MR. FLORES: I guess the State of North
23 Carolina will regulate how that restoration is
24 conducted. And I guess there are a lot of
25 regulations depending on that area. And those

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1 areas will have specific regulations that will
2 dictate how those streams are restored.

3 MS. MILLER: Should have worn my Heelys.

4 MR. CADE: Drew Cade, I'm the park manager at
5 Lake Crabtree. Just a couple questions, Luis. You
6 mentioned kind of the nine-year target for natural
7 recovery at Lake Crabtree given option four. Are
8 there actual precedents to indicate that that's
9 more than just a model, that that's actually
10 happened in the past?

11 MR. FLORES: It's a model.

12 MR. CADE: And it's only a model?

13 MR. FLORES: It's a model.

14 MR. YOUNG: That's really what the monitored
15 natural recovery will be intended to achieve. By
16 taking a sampling, we'll be able to develop
17 real-world data in terms of declines in fish tissue
18 concentrations. The current model is based on a
19 site-specific bioaccumulation factor that accounts
20 for the concentrations in fish fillet tissue
21 relative to the sediment samples. So while it is
22 site specific, it's based on limited dataset and
23 only over time will you be able to actually see
24 that rate of decay.

25 MR. FLORES: The alternative, like all the

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1 alternatives, include the five-year review for the
2 alternative. The effectiveness of the alternative
3 gets looked at every five years. So we will look
4 at that data, you know, after the first five years,
5 we will look at all the available data and then
6 determine, okay, how is it working, is there
7 anything else that needs to be done and those kind
8 of things.

9 MR. CADE: My other question is in regard to
10 Lake Crabtree being a flood control device.
11 Obviously, that's our function. Recreational
12 aspect of the park, I feel like it's essential,
13 but, obviously, it was only a result of it being
14 created as flood control. Given that and the fact
15 that it is filling up with sediment, the county may
16 one day need to dredge the lake for increasing its
17 flood control volume. How will the EPA's plans fit
18 into that grand scheme?

19 MR. FLORES: I will say that there is going to
20 have to be some kind of coordination, but I guess
21 just given that the concentrations in the sediments
22 are not -- I mean, they're not by any means
23 considered hazardous waste because they're so low,
24 you know. There will have to be some kind of
25 coordination with EPA.

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1 MS. ALLEN: Hi, my name is Betsy Allen. I'm
2 concerned about the greater Raleigh area as a
3 native of Wake County and Raleigh. And I'm
4 concerned particularly about neighborhoods above
5 the Ward Transformer area, particularly the
6 Harrington Grove neighborhood. I have reason to --
7 I have anecdotal reason to believe that there are
8 children being born in that neighborhood with birth
9 defects and with a higher incidence of
10 malformations and a higher incidence of preterm
11 pregnancies being terminated early. Wondering
12 about have you all looked in that area? Is there a
13 possibility that the PCBs could just be lying
14 there? That's off of Barton Creek, which doesn't
15 really have a great tributary and doesn't feed like
16 Brier Creek, it doesn't feed into any reservoirs.
17 I'm just wondering could it be staying in the land?
18 Is that what might happen?

19 MR. FLORES: In relation to the contamination
20 for the Ward facility itself, which is what we were
21 looking at, you know, the way it got into all these
22 areas I guess the presumption is that it was
23 carried by runoff, you know, guiding to all of
24 these creeks and keep going down gradient.

25 MS. ALLEN: We remember the evidence of them

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1 dumping on roadways. And I'm wondering if there is
2 any kind of history in the newspapers or somewhere
3 where those locations could be relocated and looked
4 at for sampling of the sediments and so forth as a
5 potential hazard to human beings?

6 MR. FLORES: I guess I will suggest to maybe
7 make a recommendation to the State of North
8 Carolina to look at that. I don't know -- I mean,
9 at least as part of this specific remedy or
10 proposed plan or investigation, it basically is
11 looking at the facility itself and how contaminants
12 are moving from that facility. What Mr. Ward did
13 years ago when they sprayed the PCBs around the
14 counties in North Carolina, I don't have -- I don't
15 have information about that. I don't know.

16 MS. BACKUS: Pat Backus. If you wanted to
17 speak, it looked like you were edging that way. I
18 think it was in Wake County. I think Wake was one
19 of the counties if I remember correctly. And they
20 cleaned up to the one part per million and did an
21 awful lot of sampling there. So I don't see -- you
22 can look at the records and see that. But they
23 have every mile identified and there were thousands
24 of samples taken when they removed the soil.

25 MR. WINBERRY: Jerry Winberry with Envirotech

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1 Solutions. In your presentation you talked about
2 looking at protecting the environment and, of
3 course, the population with fish sampling and soil
4 sampling. Whenever you excavate, naturally you
5 have fluffing of soil into the air. The State of
6 North Carolina does have reference levels by which
7 PCBs are not to be exceeded. Within this program
8 then, is there a consideration to protect the
9 public against air emissions during this
10 remediation, both pre-remediation, during the
11 remediation and post-remediation?

12 MR. FLORES: Yeah, I would think those
13 decisions will be considered during the remedial
14 design, but it seems like every site that we do
15 excavation of PCBs, we also do some kind of air
16 monitoring.

17 MR. McLAWHORN: I'm Dan McLawhorn with the
18 City Attorney's Office in Raleigh. Looking at
19 Alternative 4 and understanding that you're talking
20 about dry-bed excavation of the streams, has there
21 been any consideration given to the City of
22 Raleigh's infrastructure that runs along and
23 parallel to those streams and whether or not it's
24 actually feasible to shift the bed to another
25 location for dry-bed excavation?

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1 MR. FLORES: We haven't really looked at that,
2 those kind of details. Again, that will be looked
3 at in more details in the design phase. I guess at
4 this point the way that the alternative -- the cost
5 was estimated was based on dry excavation. That's
6 not to say that it could change due to -- due to,
7 you know, additional information that we receive
8 during the remedial design like, you know, like
9 making it totally unfeasible to do it because of
10 the infrastructure.

11 MR. McLAWHORN: But I thought feasibility was
12 an issue you had to achieve when choosing an
13 alternative, not moving past that and then find a
14 block in the design phase?

15 MR. FLORES: I'm sorry, say that again.

16 MR. McLAWHORN: You had nine criteria up
17 there. Feasibility is one of them that you have to
18 answer in choosing the alternative. You can't
19 postpone that until design.

20 MR. FLORES: Implementability, yeah. There is
21 certainly going to be a lot of details that we
22 probably learn during the RD.

23 MR. CAMPBELL: I can respond to that in part.
24 I don't think what we contemplate would be
25 rerouting the streams. You misunderstand that.

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1 Another site we're cleaning up that you
2 probably aren't familiar with, but there is a site
3 called Chattanooga Creek up in Tennessee. It's a
4 larger stream than Brier Creek. And what we've
5 done there is we have built an earthen dam in the
6 stream and then pumped the water around the area
7 that's being excavated through a flexible line and
8 then move that down. So that's one way of doing
9 it. But I think the important thing to know is
10 that the decision is that we would remove the
11 sediments above that one part per million level
12 through either a dry excavation method or if it
13 turns out that it would be a more appropriate way
14 of doing a wet dredging, we could potentially do
15 that. So the main thing to understand is that we
16 would be going after the sediments that are above
17 the one part per million.

18 MR. MORAN: Chris Moran from Weston. When we
19 did the costing for the feasibility study, that's
20 exactly the technique that we costed.

21 MR. JOHNSON: Keith Johnson. Can you give us
22 any sense of what your cost may be beyond what
23 you've presented here? Your cost for the RI, FS,
24 through the broad stage, I assume you will be
25 seeking recovery of those costs from responsible

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1 parties. Presumably you're tracking them as you go
2 along. Based on other projects or what you have
3 incurred so far, are you able to give us any sense
4 of how much money that may be at that point in
5 time?

6 MR. FLORES: Yeah, I do not have that kind of
7 information. And every site is certainly
8 different. I guess we can get information on how
9 much cost has been spent to date, but in order to
10 determine how much cost will be spent, you know,
11 preparing the record of decision or doing
12 negotiations or with the PRPs, I wouldn't be able
13 to say.

14 MR. deFUR: This is Peter deFur again. Luis,
15 I wondered -- you referred to several alternatives
16 requiring a survey for freshwater mussels.

17 MR. FLORES: Right.

18 MR. deFUR: I would have thought that EPA
19 would have directed that to occur during the
20 ecological risk assessment phase. And if not then,
21 then is there any reason to wait on that? Why
22 shouldn't that proceed ahead immediately if it
23 hasn't been done? I'm not clear why it hasn't been
24 done already.

25 MR. YOUNG: Charles Young responding. It was

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1 a recommendation that came out of the ecological
2 risk assessment. While there was a survey of the
3 repairing area associated with the stream and there
4 was fish and crayfish collections from the reaches
5 of stream up above that, the potential presence of
6 mussel populations was a concern, but was not
7 determined by any formal survey. But the fact that
8 they have been present in this watershed means that
9 we felt that a professional malacologist should go
10 through and determine that.

11 It could potentially have impacts on the
12 dredging locations in that you might end up having
13 to avoid a spot in order to be able not to, you
14 know, damage an existing mussel population. It
15 would also mean that any changes in water flow,
16 turbidity levels associated with dredging
17 activities would need to be addressed in order not
18 to impact any populations there. So it's something
19 that would be expected to be a necessary component
20 prior to the completion of the remedial design, but
21 it hasn't been performed yet.

22 MR. deFUR: I guess for all those reasons is
23 why I'm wondering why EPA hasn't said go forth and
24 do?

25 The other question is that EPA is proposing

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1 here, and this feeds back on one of the other
2 questions about the sources, and source control is
3 a critical element in cleaning up any sort of site.
4 And I know that the nature of the specific source
5 at the Ward Transformer has changed in recent
6 years, so it turned out that the contamination is
7 deeper, for example. And it hadn't occurred to me
8 until this evening to wonder whether or not there
9 is a further upstream source. And there are ways
10 to look at it. You can do a cut and fill
11 evaluation with, you know, pictures over time.

12 So has that been done? And if not, how will
13 it affect the remediation when something turns out
14 to be different at the source? I mean, this being
15 a Superfund site, we can expect to find new things.

16 MR. FLORES: I didn't -- I didn't quite
17 understand it. So are you saying --

18 MR. deFUR: Are you sure that you've got the
19 source? Does there need to be a further source
20 control or source identification analysis?

21 MR. FLORES: I think we got the source.

22 MR. YOUNG: Pretty much at the head of the
23 watershed. It's right at the divide. You don't
24 see a potential --

25 MR. MORAN: Mount Herman Road is actually a

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1 divide for the watershed.

2 MR. deFUR: You're right.

3 MR. MORAN: There would be no -- they sampled
4 all the way up and even across Mount Herman Road.
5 So I'm not sure what your question is.

6 MR. deFUR: And there is no evidence that
7 there is groundwater coming in -- coming in through
8 groundwater up at the site itself?

9 MR. MORAN: There are concentrations in the
10 groundwater, but they're --

11 MR. YOUNG: Low in mass perspective.

12 MR. deFUR: They're low in the groundwater.
13 The final question may be one the State has the
14 answer to. That is whether or not the fish
15 consumption advisories are working?

16 MR. FLORES: I'm sorry?

17 MR. deFUR: Do you know if the fish
18 consumption advisories are working? And that might
19 be a question for the State.

20 MR. FLORES: We hope they are.

21 MR. deFUR: Is the State keeping an eye on
22 that?

23 MS. WILLIAMS: Yes. Drew, you want to come up
24 here too? Luanne Williams, a State toxicologist
25 for the North Carolina Department of Health and

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1 Human Services. I work for this gentleman here in
2 determining -- this is -- we've determined if
3 people are following advice or not. It's the State
4 Health Director's decision to issue advisories.
5 And, as you know, we have issued advisories from
6 Little Brier Creek, Brier Creek Reservoir, Brier
7 Creek, no consumption of any fish. And then Lake
8 Crabtree is no consumption of carp or cats, and a
9 meal a month for everything else. And then for
10 Crabtree Creek, the levels have gotten lower than
11 the Lake Crabtree levels. And so we issued an
12 advisory for carp, cats and large mouth bass of one
13 meal a month. So they are still elevated in the
14 carp and cats. And we have noticed that people --
15 most people follow advice, but then there were some
16 that you discovered that would take some cats home
17 at Lake Crabtree. I'll let Drew talk to you about
18 that.

19 MR. CADE: Fishing activity in general has
20 been reduced dramatically because of the signage,
21 the programs the park offers. There are still
22 certain populations that fish, you know, some of
23 the social trails, not the park proper. And so,
24 you know, our job is to make sure that the signs
25 are very effective. They have 30 of them around

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1 the lake itself. They are all bilingual. And I
2 think the message is finally getting out based on
3 the fact that, you know, I'm seeing much less
4 fishing, obviously, out there than we have in the
5 past. It's sad. I mean, I'd love to see it.

6 But the county incorporated the State
7 language, which was an advisory, into a county
8 policy of catch and release only. Due to the fact
9 that the task force noticed several people still
10 fishing in the lake and the surrounding waters, the
11 county felt like the appropriate step to properly
12 manage the situation with signs was to go ahead and
13 make it a catch and release only situation. We
14 incorporated the State language that Luanne came up
15 with, but the county policy in county-managed lands
16 is catch and release only.

17 So we have the enforcement capability. If we
18 see someone with a bucket of fish, they may not
19 like it, but I have the ability to dump that bucket
20 out into the water for their own protection.
21 That's a big step in this I think.

22 MS. WILLIAMS: Yes. The park management has
23 done a really good job of enforcing that and making
24 sure that the signs provide useful information that
25 people can understand what the message is.

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1 And, also, I would like to share with you that
2 through a grant through CDC Agency for Toxic
3 Substance and Disease Registry, the North Carolina
4 Department of Health has been able to obtain
5 additional fish tissue samples along tributaries,
6 other tributaries that flow into the Neuse River.
7 We did -- EPA helped us out like 30 miles
8 downstream from Ward. And we appreciate that. And
9 they collected fish tissue samples. And the
10 Division of Water Quality collected fish tissue
11 samples for us and EPA's lab in Atlanta analyzed
12 them, but we were still finding elevated levels
13 30 miles downstream from Ward. I'm not saying Ward
14 is responsible, but it was 30 miles downstream
15 where Crabtree Creek enters the Neuse. And we had
16 a few catfish, one bass and the levels were in
17 those fish at a point where we would issue a one
18 meal per month still. But, again, it was only two
19 cats and one large mouth bass where Crabtree Creek
20 enters the Neuse.

21 So I know we've got Neuse River folks here. I
22 wanted you to know about that. But two weeks ago
23 the Division of Water Quality collected more tissue
24 samples for us, bottom feeders, bass, sunfish along
25 Walnut Creek and Rocky Branch, which are

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1 tributaries that flow into the Neuse River. It's
2 about seven miles, for those of you that are
3 interested, to the Neuse. And so we selected those
4 locations because we had some reports provided to
5 us by the Division of Waste Management that there
6 may have been transformer facilities located along
7 those surface water bodies, Rocky Branch and Walnut
8 Creek.

9 So time will tell. In two weeks we should
10 have those fish sample results. And I will
11 certainly let folks in the Division of Waste
12 Management, Drew, the Riverkeeper Foundation and
13 others, I've got a long list of contacts, know what
14 we found. And we may be issuing more advisories,
15 but I don't know.

16 MR. JENKINS: If I could just ask a quick
17 follow up to that? Matt Jenkins again. I was
18 wondering if the costing for the alternatives
19 include the community outreach? Did that also
20 include increased funding for actual people to go
21 out and talk to the fishermen and explain the issue
22 to them? I know fishing may have decreased
23 dramatically, but I see people out there every time
24 I bike.

25 MR. FLORES: Yeah, the outreach programs will

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1 be -- I guess we will develop those and come up
2 with different ideas, maybe look at other sites
3 where things have been done and they have been
4 effective and try to implement them here.

5 MR. JENKINS: Thank you.

6 MR. FLORES: Any other questions? All right.
7 Well, the comment period ends October 4th. So if
8 you think of other questions or have any additional
9 comments, please send those to me. My information
10 is in the back of that proposed plan fact sheet, my
11 e-mail and my telephone. So if you want to send an
12 e-mail or call, please feel welcome to. Thank you.

13 (Whereupon, at 8:16 p.m., the proceedings
14 concluded.)

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1 STATE OF NORTH CAROLINA)

2 COUNTY OF WAKE)

3 CERTIFICATE OF REPORTER

4 I, MAREN M. FAWCETT, Registered Professional
5 Report and Notary Public in and for the State of North
6 Carolina, duly commissioned and authorized to administer
7 oaths and to take and certify depositions, certify that
8 the foregoing is a true and correct transcript of said
9 proceedings to the best of my ability and understanding;
10 that I am not related to any of the parties to this
11 action; that I am not interested in the outcome of this
12 case; that I am not of counsel nor in the employ of any
13 of the parties to this action.

14 IN WITNESS WHEREOF, I have hereto set my hand,
15 this the 17th day of August, 2007.

16

17

18



19

Maren M. Fawcett, RPR
Notary Public - North Carolina
Certificate No.: 200621500068
My Commission Expires: 7/31/2011

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SUPERFUND PROPOSED PLAN FACT SHEET

**WARD TRANSFORMER SITE OPERABLE UNIT 1
RALEIGH, NORTH CAROLINA**

August 2007

INTRODUCTION

This Proposed Plan identifies the preferred alternative for remedial action at the Ward Transformer Site (the Site) Operable Unit 1 (OU1). OU1 deals with areas downgradient from the Ward Transformer facility.

The Proposed Plan presents EPA's recommendation concerning how best to address contamination at the Ward Transformer Site OU1. It presents the alternatives that were evaluated, and explains the reasons EPA recommends the preferred alternative. It solicits public review of and comment on all alternatives described, and provides information on how the public can be involved in the remedy selection process.

This document is issued by the U.S. Environmental Protection Agency (EPA), the lead agency for site activities, and the North Carolina Department of Environment and Natural Resources (NC DENR), the support agency. EPA, in consultation with the NC DENR, will select a final remedy for the Site after reviewing and considering all information submitted during the 30-day public comment period. The final remedy decision will be documented in a Record of Decision (ROD). A ROD is a public document that explains which cleanup alternative will be used at a Superfund site and the reasons for selecting the alternative.

DATES TO REMEMBER

PUBLIC COMMENT PERIOD:

August 6, 2007 to September 4, 2007

U.S. EPA will accept written and oral comments on this Proposed Plan during the public comment period.

PUBLIC MEETING:

August 14, 2007, 7:00 pm

U.S. EPA will hold a public meeting to explain this Proposed Plan and all of the alternatives considered. Oral and written comments will also be accepted at the meeting. The meeting will be held at:

Hilton North Raleigh
3415 Wake Forest Road
Raleigh, North Carolina, 27609-7330
Phone (919)-872-2323

For more information regarding the Site, see the Administrative Record at the following locations:

EPA Records Center	North Raleigh Library
61 Forsyth Street SW	7009 Harps Mill Road
Atlanta, GA 30303	Raleigh, NC 27615
(404)562-8946	(919) 870-4000

EPA, in consultation with the NC DENR, may modify the preferred alternative or select another response action presented in this Proposed Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund; Pub. L. No. 96-510), as amended at Pub. L. No. 99-499, and Sections 300.430(f)(2) and f(3) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). EPA relies on public input to ensure the concerns of the community are considered in the selection of an effective remedy for each Superfund site.

This Proposed Plan summarizes information that can be found in greater detail in the Remedial Investigation (RI) and Feasibility Study (FS) Reports and other documents contained in the Administrative Record file for this Site.

EPA and the NC DENR encourage the public to review these documents to gain a more comprehensive understanding of the Site and Superfund activities that have been conducted at the Site.

SITE BACKGROUND

The Ward Transformer Site is located along Mount Herman Road, in a predominantly industrial area of northwestern Raleigh, Wake County, NC. The Ward Transformer facility is located 600 feet (ft) south-southeast of the Northern Wake Expressway/Interstate-540 (I-540), 1,000 ft southwest of US highway 70, and is adjacent to property owned by the Raleigh-Durham International (RDU) Airport.

RDU Airport proper (i.e., terminals) is located approximately 2 miles south of the Site, with airport runways located less than 1 mile south.

The Ward Transformer facility is owned by Ward Transformer Company, Inc. The facility was built on approximately 11 acres of previously undeveloped land in 1964 and electrical transformers were built, repaired, sold, and reconditioned at the Site until around 2005. As a result of Ward's operations, polychlorinated biphenyls (PCBs) were released into the environment. An EPA-lead phased remedial investigation was conducted from April 2003 to April 2007. As part of the investigation, soil, sediment, surface water, groundwater, and fish samples were collected. The investigation covered the facility property and surrounding properties, together with more than 30 miles of waterways including unnamed tributaries to Little Brier Creek (Reach A, B and C), Little Brier Creek (Reach D), Brier Creek Reservoir, Brier Creek, Lake Crabtree and some tributaries, Crabtree Creek and some tributaries, and a 0.5 mile segment of the Neuse River (See attached figure 1-5).

In September 2005, EPA signed an Administrative Settlement Agreement and Order on Consent with a group of potentially responsible parties (PRPs) to implement a removal action. The removal action is underway and includes contaminated soil/sediment removal at the Ward Transformer facility and some immediate surrounding areas, including Reach A.

Operable Unit 1, the subject of this proposed plan, includes Reaches B, C and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and Crabtree Creek. These areas are all downgradient from Reach A and the facility.

Community Relation Activities

The Ward Transformer Superfund Site was included on the National Priorities List (NPL) or Superfund list in April 2003. EPA has conducted community relations activities to inform and involve the community about site activities. Community relations activities conducted include mailing information fact sheets and e-mails, press releases, availability sessions, sampling plans development meeting, presentations and public meetings. The following is a summary of community meetings conducted in Raleigh:

Event	Date
Remedial Investigation (RI) "Kick-off" Public meeting	March 13, 2003
RI findings meeting	November 16, 2004
Task Force Presentation	August 4, 2005
Sampling Plan Development meeting	October 27, 2005
Public Availability Session	January 19, 2006
Public Meeting	June 21, 2006
Public Availability Session	March 17, 2007

Study Area Characteristics

For the purpose of this Proposed Plan, the study area begins with Reach B. Reach A and the Ward facility are being addressed under a removal action and, as a result, these areas are not discussed in this Proposed Plan.

The Study Area included:

Surface Water Body		Length of Reach (miles)
Unnamed Tributary to Little Brier Creek	Reach B	0.3
	Reach C	0.4
Little Brier Creek proper	Reach D	0.8
Brier Creek Reservoir		1.7
Brier Creek		1.8
Lake Crabtree Tributaries include Stirrup Iron Creek, Upper Crabtree Creek, Black Creek, and Haleys Branch		1.5
Crabtree Creek (entire watershed) Tributaries include Reedy Creek, Sycamore Creek, Turkey Creek, Haresnipe Creek, Richland Creek, Mine Creek, Beaverdam Creek, Big Branch, Pigeon House, and Marsh Creek		21.5
Neuse River		0.5

Summary of RI Findings

An EPA-lead Remedial Investigation (RI) was conducted from April 2003 to April 2007. As part of the investigation, soil, sediment, surface water, groundwater, and fish samples were collected. The following is a summary of the findings of the investigation for OU1. For more specific details, please refer to the Remedial Investigation report located in the information repository.

Sediments/Soil

PCBs were detected above the 1 mg/kg level in at least one sediment sample collected from Reaches B, C and D. Sediment samples collected downgradient from each of Reach D did not exceed 1 mg/kg. The following list summarizes the sediment results for PCB analyses for Reach B and areas downgradient:

Location	Number of Samples	Max PCB Aroclor concentration mg/kg
Reach B	20	3.0
Reach C	18	2.6
Reach D	13	4.2
Brier Creek Reservoir	6	0.31
Brier Creek	2	0.28
Lake Crabtree	20	0.48
Crabtree Creek	13	Not detected
Neuse River	1	Not detected

Soil samples collected downgradient from Reach A did not exceed 1 mg/kg.

Fish Tissue

Whole body fish samples were collected and analyzed to assess ecological risks, and fish filet tissue samples were prepared and analyzed to assess human health risks.

The following are fish action levels recommended by the State of North Carolina:

PCB concentration	NC Recommendation
<0.05 mg/kg	Unlimited consumption
0.05–0.10 mg/kg	One meal per week.
0.10–0.50 mg/kg	One meal per month
>0.5	Do not eat

Based on the analytical results of the fish tissue samples and the above-mentioned action levels, the State of North Carolina Department of Health and Human Services issued fish consumption advisories for Little Brier Creek (downstream of Brier Creek Parkway), Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek. The Little Brier Creek and Brier Creek Reservoir fish consumption advisory

recommends that fish should not be consumed. The Lake Crabtree advisory recommends that catfish and carp should not be eaten and that no more than one meal per month of other fish species should be eaten. The advisory for Crabtree Creek recommends that consumption of carp, catfish, and largemouth bass be limited to no more than one meal per month.

Fish tissue data from Crabtree Creek shows PCBs in fish below Lake Crabtree. Although the sediment samples from Crabtree Creek did not contain detectable concentrations of PCBs, their presence in fish samples indicates uptake and bioaccumulation of PCBs via the food chain.

EPA, the State of North Carolina, and Wake County have posted signs for the areas subjected to the fish advisories.

Lake Crabtree Soil and Surface Water Samples

Soil samples were collected at recreational areas around Lake Crabtree and at the Cedar Fork athletic fields. No PCBs were detected in any of the samples collected.

Surface water samples were collected at Lake Crabtree. No PCBs were detected in any of the samples collected.

SCOPE AND ROLE OF RESPONSE ACTION

The Ward Transformer Site has been divided in two areas for remediation purposes:

Operable Unit 1 (OU1) – This operable unit is the subject of this Proposed Plan. It includes the following areas downgradient from the Ward Transformer facility: Reaches B, C and

D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and Lower Crabtree Creek.

Removal Action Area – the area undergoing the removal action includes the Ward Transformer Facility and immediate surrounding areas including Reach A.

Operable Unit 2 (OU2) – OU2 will include the final remedy for the areas subjected to the ongoing removal action, and any groundwater issues.

REMEDIAL ACTION OBJECTIVES FOR OU1

The Remedial Action Objectives for OU1 include:

Eliminate or minimize any potential risks to human health or the environment due to consumption of contaminated fish from Brier Creek, Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek, by reducing PCB concentrations in fish to regulatory or risk-based levels.

Eliminate or minimize any potential risks to human health or the environment due to direct contact with contaminated sediments in Reaches B, C, and D, and lower Brier Creek by reducing PCB concentrations in sediments to regulatory or risk-based levels.

Minimize any potential downstream migration of PCB-contaminated sediments.

SUMMARY OF RISKS ASSESSMENTS

Risk assessments were conducted to determine the potential risk of any current and future exposure of human and ecological receptors to contaminants. Provided below are the main conclusions of the risk assessments. For more

specific details, please refer to the risk assessments included in the Remedial Investigation report located in the information repository.

Human Health Risk Assessment

Based on the results of the human health risk assessment, the main risks associated with contaminants at the Operable Unit 1 study area are due to human consumption of contaminated fish; and the potential exposure to sediments with PCB concentrations above 1 mg/kg.

Ecological Risk Assessment

Based on the results of the ecological risk assessment, the main risk associated with contaminants at the Operable Unit 1 study area is due to ecological receptor exposure to contaminated fish.

REMEDIAL ALTERNATIVES

The following Remedial Alternatives were developed and documented in the Feasibility Study for the Site.

Alternative 1 – No Action

- Assumes no action to be taken.
- Conduct five-year reviews.

The No Action alternative is evaluated as required by law to serve as a baseline for other alternatives. Under the No Action alternative, no remedial actions would be implemented at the Site. The existing site conditions would continue to remain in place without any active remediation technologies or institutional controls. Risks posed by PCBs under hypothetical future scenarios would likely remain for an extended period of time. Any

contaminant reduction would be due to naturally occurring processes.

Although the State of North Carolina has already issued fish consumption advisories and EPA, the State of North Carolina and Wake County have fish consumption signs already in place, for the purpose of this evaluation, it is assumed that the fish advisories and signs are not part of the No Action alternative. The No Action alternative would only include a review of the remedy every 5 years for 30 years (five year reviews).

Alternative 2 - Institutional Controls

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- Conduct five-year reviews.

Under this alternative, North Carolina fish consumption advisories and signs would continue to remain in effect. Additionally, community outreach and public educational programs would also be conducted to inform the public of the fish consumption advisories and signs. The continued implementation of fish advisories and signs would reduce the potential risks to humans through fish consumption. Fish advisories and signs would remain in place until such time as the PCB concentrations in aquatic biota decline to less than 0.05 mg/kg. Because this alternative does not include any monitoring of PCB levels, attainment of these levels will not be known. Five-year reviews will also be conducted as required by CERCLA.

Alternative 3 - Monitored Natural Recovery (MNR) and Institutional Controls

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- MNR; periodic monitoring of sediments and aquatic biota.
- Conduct five-year reviews.

MNR is a remedy for contaminated media that typically uses a wide range of ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in media, thereby reducing any potential risk to human and/or ecological receptors. MNR is especially suitable for a Site such as this where the main source of contamination will be removed (Ongoing Removal Action at Reach A and the Ward Transformer facility).

Current levels of PCBs in sediment samples within OU1 are low enough that continued burial, dispersion, and mixing-in-place of sediments alone would reduce the PCB concentrations significantly even without the destruction or transformation of PCBs.

MNR would involve the periodic monitoring of sediments which would enable assessment of variations in PCB concentrations in sediments over time. In addition, monitoring of aquatic biota (fish sampling) would support decisions for continuance and/or justify modifications to existing North Carolina fish consumption advisories and signs.

Like Alternative 2, Alternative 3 includes the continuance of the North Carolina fish consumption advisory and signs, the educational and community outreach programs, and the 5 year reviews.

Alternative 4 - Excavation and Off-Site Disposal of Sediments in Reaches B, C, D,

and Lower Brier Creek; MNR in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; and Institutional Controls

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- Conduct pre-excavation sampling and endangered mussel study.
- Excavate sediments in Reaches B, C, D and lower Brier Creek, and transport sediments off-site for appropriate disposal.
- Site and stream restoration.
- MNR; periodic monitoring of sediments and aquatic biota.
- Conduct Five-year review.

Under this alternative, a pre-excavation sediment sampling program will be implemented. This sampling program will be conducted to more accurately define the limits of excavation areas in Reaches B, C, D, and lower Brier Creek.

A mussel survey will also be conducted to determine if threatened/endangered mussel species are present in the areas selected for excavation.

Based on the results of the pre-excavation sampling program, sediments with PCB concentrations above 1 mg/kg will be excavated from Reaches B, C, D, and lower Brier Creek. Sediments will be disposed off-site in an appropriate landfill. Stream restoration would be performed once the contaminated sediments are removed.

Like Alternative 3, Alternative 4 includes periodic monitoring of sediments and aquatic biota (fish sampling) associated with MNR, the continuance of the North Carolina fish consumption advisory and signs, educational

and community outreach programs, and the 5 year reviews.

Alternative 5 - Excavation of Sediments in Reaches B, C, D, and Lower Brier Creek; Excavation/Dredging of Sediments in Brier Creek Reservoir and Lake Crabtree; Off-Site Disposal of Sediments; MNR in Lower Crabtree Creek and Institutional Controls

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- Conduct pre-excavation sampling and endangered mussel study.
- Excavate sediments in Reaches B, C, D, and lower Brier Creek, and transport sediments off-site for appropriate disposal.
- Dredge or excavate sediments in Brier Creek Reservoir and Lake Crabtree, and transport sediments off-site for appropriate disposal.
- Site and stream restoration
- MNR; periodic monitoring of sediments and aquatic biota.
- Conduct Five-year review.

Like Alternative 4, Alternative 5 includes excavation of sediments from Reaches B, C, D, and lower Brier Creek, periodic monitoring of sediments and aquatic biota (fish sampling) associated with MNR, the continuance of the North Carolina fish consumption advisory and signs, educational and community outreach programs, and the 5 year reviews.

In addition, sediments in the Brier Creek Reservoir and Lake Crabtree will be dredged or excavated and transported off-site for disposal. The choice of dredging or excavation technologies to be implemented in the Lake and the Reservoir will be determined in the remedial design phase.

PCB levels detected in Brier Creek Reservoir and Lake Crabtree are already in the low part per million (ppm) ranges. Therefore, for the purpose of this alternative, it is assumed that all of the sediments in Brier Creek Reservoir and Lake Crabtree would have to be removed to ensure that the availability of very low PCB levels is completely eliminated for ecological receptors.

Excavated/dredged areas will be restored once the sediments are removed.

COMPARATIVE ANALYSIS OF ALTERNATIVES

The alternatives were compared to one another using various criteria and guidelines. The comparative analysis considered potential positive, negative, or neutral aspects of the various alternatives. EPA has also developed factors or principles specifically for sediment sites such as this Site. Consideration of these principles and more specific details about the nine criteria evaluation can be found in the Feasibility Study (FS) report located in the information repository. The nine evaluation criteria are discussed below.

Evaluation Criteria for Superfund Remedial Alternatives
Overall Protectiveness of Human Health and the Environment
Compliance with ARARs
Long-term Effectiveness and Permanence
Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment
Short-term Effectiveness
Implementability
Cost

State Acceptance

Community Acceptance

Overall Protection of Human Health and the Environment determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.

Alternative 1 would not be protective of human health or the environment because there are no actions associated with this alternative.

Alternative 2 and 3 will be more protective than Alternative 1 because of the fish advisories and signs, and the educational and community outreach programs to inform the public about the fish consumption advisories and the risks of consuming PCB-contaminated fish.

Alternatives 1 and 2 may eventually achieve clean up goals, but without monitoring, it would not be possible to determine when those goals are reached. Alternative 3 may also eventually achieve clean up goals, and the monitoring program will document achievement.

Alternatives 4 and 5 are more protective of the human health and the environment than Alternative 3, because these alternatives remove contaminated sediments with concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek, therefore limiting any potential exposure to sediments above this level. Modeling results show that excavating sediments with PCB concentrations above 1 mg/kg from Reaches B, C, D, and lower Brier Creek will accelerate the natural recovery processes in sediments at Brier Creek

Reservoir and Lake Crabtree. Therefore, in Alternative 4, PCB levels in sediments in Brier Creek Reservoir and Lake Crabtree would gradually decrease through natural processes at a much faster pace than in Alternative 3. As a result, PCB concentrations in fish would also gradually decrease to levels below the threshold for fish consumption advisories and signs.

In addition to sediment removal from the streams, Alternative 5 would also remove sediments in Brier Creek Reservoir and Lake Crabtree. As a result, the time required to achieve acceptable fish tissue PCB concentrations after completion activities may be less than the timeframe required in Alternative 4. However, due to the complexity of Alternative 5, the total time required for planning, design and implementation of this alternative would be considerable greater than Alternative 4.

With regards to protection of the environment, Alternative 3 may take a long time to achieve clean up goals. Alternatives 4 and 5 will achieve clean up goals in a shorter period of time than Alternative 3, but would destroy/disturb the habitat and aquatic biota in segments of the remediated streams. Therefore, the benefits of removing sediments must be weighed against the disruption or destruction of aquatic and biota habitats in and around the streams.

In addition, the large-scale excavation/dredging operations in Brier Creek Reservoir and Lake Crabtree in Alternative 5 will disturb or destroy benthic and other aquatic biota and habitats in the reservoir and the lake. The dredging/excavation activities of Alternative 5 could also adversely impact threatened bald eagles within the reservoir and lake areas for foraging and breeding. Thus, for

Alternative 5, the benefits of removing sediments from the reservoir and the lake must be weighed against the disruption or destruction of aquatic and avian biota and habitats during excavation/dredging.

Compliance with ARARs evaluates whether the alternative meets Federal and State environmental statutes, regulations, and other requirements that pertain to the site. (ARARs = Applicable or Relevant and Appropriate Requirements)

Chemical-specific ARARs may not be met in Alternatives 1 and 2. Because monitoring is not included as part of these alternatives, achieving cleanup goals would be unknown.

In Alternative 3, the chemical-specific ARAR of 1 mg/kg for PCBs may be met in the long-term for sediments in Reaches B, C, D, and lower Brier Creek through natural recovery processes. In Alternatives 4 and 5, chemical-specific ARARs of 1 mg/kg for sediments in Reaches B, C, D and lower Brier Creek will be met after excavation activities are completed.

Action-specific ARARs are not relevant for Alternatives 1, 2, and 3 because there are no active remedial actions associated with these alternatives. In Alternatives 4 and 5, all applicable action-specific ARARs would be met during the remedial actions. Measures will be taken to minimize any dust during excavation activities. In addition, for Alternative 5, any NPDES permit requirements will be met, if water from dewatering operations requires treatment prior to being discharged.

Location-specific ARARs are not relevant for Alternatives 1, 2, and 3 because there are no active remedial actions associated with these alternatives. In Alternatives 4 and 5, applicable

location-specific ARARs would be met. Precautions will be taken to minimize any impact on identified local endangered and threatened species. Also, activities will be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks (Umstead Park), construction, and erosion and sediment control.

Long-term Effectiveness and Permanence considers the ability of an alternative to maintain protection of human health and the environment over time.

Alternative 1 does not offer protection to human health or the environment in the short or long-term basis. In Alternatives 2, 3, 4 and 5, potential risks associated with fish consumption are expected to be lower because of the fish consumption advisories and signs.

Due to the absence of monitoring programs in Alternatives 1 and 2, the long-term reduction of risks would not be known. Also, without monitoring, the continuing need for Institutional Controls in Alternative 2 could not be evaluated.

In Alternative 3, risks to humans and the environment are expected to gradually decrease over time with the reduction of PCB concentrations in sediment through natural processes and will be documented by a long term monitoring program. PCB concentrations in fish are expected to decline with the decrease of PCB concentrations in sediment.

In Alternatives 4 and 5, the removal of sediments to levels below 1 mg/kg PCB from Reaches B, C, D, and lower Brier Creek will reduce any potential risks associated with sediment exposure. In Alternative 4, once the

sediments with PCB concentrations above 1 mg/kg are removed from these areas, the natural recovery process of Brier Creek Reservoir, Lake Crabtree, and beyond would speed up.

In addition to sediment removal from the streams, Alternative 5 would also remove sediments in Brier Creek Reservoir and Lake Crabtree. As a result, the time required to achieve acceptable fish tissue PCB concentrations after completion activities may be less than the timeframe required in Alternative 4. However, due to the complexity of Alternative 5, the total time required for planning, design and implementation of this alternative would be considerable greater than Alternative 4

In Alternative 5, if dredging is used, due to technology limitations, some dredging residuals levels will remain in the reservoir and lake, including low levels of PCB contamination in the biologically active sediment zone. PCBs in dredging residuals could impact fish concentrations in the reservoir and lake for many years after completion of the dredging operations.

In addition, the large-scale excavation/dredging operations in Brier Creek Reservoir and Lake Crabtree in Alternative 5 will disturb or destroy benthic and other aquatic biota and habitats in the reservoir and the lake. The dredging/excavation activities of Alternative 5 could adversely impact threatened bald eagles within the reservoir and lake areas for foraging and breeding. Over the long term, re-establishments of these habitats may be difficult.

Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment evaluates an alternative's use of treatment to

reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.

EPA will use treatment to address site contaminants wherever practicable; however, because of the relatively low levels of PCBs in the sediments, treatment is not proposed for any of the alternatives. Therefore the statutory preference for treatment is not met.

Short-term Effectiveness considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.

Alternatives 1, 2, and 3 do not involve any active remedial action; therefore, they would not pose any additional risks to the community or workers during implementation, nor would they result in any adverse environmental impacts.

In Alternative 3, under current conditions (assuming that the Removal Action at the Ward Transformer facility and Reach A is completed before commencement of OU1 activities), modeling indicates that PCB concentrations in sediments at Brier Creek Reservoir and Lake Crabtree may take more than 30 years to decline to levels that correspond to acceptable PCB levels in fish.

In Alternatives 4 and 5, the potential for additional risks to the community may exist due to dust and excessive noise from the construction of access roads, construction equipment, and vehicular traffic to the off-site disposal facility. Risks to the community will be minimized by establishing buffer zones around the work areas, limiting work hours, and using dust-suppressing techniques. Risks

to the environment may include clearing of vegetation and trees for access roads and excavation/dredging equipment. Measures will be taken to minimize the impact on the environment by avoiding the wetlands and floodplain areas to the extent possible. There will be adverse impacts to the stream and lake habitats due to the sediment removal activities, especially for benthic and other aquatic organisms. Many of these organisms may be disturbed or destroyed during the excavation/dredging activities. The presence or absence of threatened or endangered mussel species needs to be established prior to commencing intrusive activities. If threatened or endangered mussel species are identified, additional safeguards will need to be put into place to protect these species. In addition, the potential for adverse impacts to threatened bald eagles utilizing areas within OU1 as foraging and breeding habitat exists and precautions would be required to minimize these potential impacts. Due to the larger extent and complexity of excavation/dredging activities associated with Alternative 5, all the above-mentioned impacts will be much greater for Alternative 5 than Alternative 4.

In Alternative 4, the estimated time required to complete the remediation work is 3 to 5 months. The estimated time required to attain acceptable PCB concentrations in fish tissue at the Brier Creek Reservoir is approximately 14 years. The time required to attain acceptable PCB concentrations in fish tissue at Lake Crabtree is approximately 9 years.

Due to the complexity of Alternative 5, it is estimated that planning, design and implementation of this alternative would require a considerable greater amount of time than Alternative 4. In addition, it is estimated that any dredging activities associated with Alternative 5 would take at least 3 years to

complete after all design and planning documents are completed.

In Alternative 5, the estimated time required to attain acceptable PCB concentrations in fish tissue at the Brier Creek Reservoir is approximately 12 years after the completion of excavation/dredging. The time required to attain acceptable PCB concentrations in fish tissue at Lake Crabtree is expected to be 8 years.

Therefore, between Alternatives 4 and 5, removing a larger amount of sediments in Alternative 5 does not necessarily correspond to a shorter amount of time to achieve clean up goals than in Alternative 4.

Implementability considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.

Alternatives 1, 2, and 3 can be easily implemented because there is no construction, involved. Alternatives 1 and 2 can be easily implemented because there are no monitoring activities.

In Alternatives 2, 3, 4 and 5, the North Carolina fish consumption advisories and signs are already in place. In Alternatives 3, 4 and 5 reduction in PCB concentrations in sediment and fish will be determined through the periodic monitoring program, which can be easily implemented.

Alternative 4 is technically feasible to implement. Contractors are readily available for construction of access roads, excavation, and off-site disposal. Coordination with other agencies and obtaining approvals and permit equivalencies for excavation, transport of excavated materials, etc. will be required.

The implementation of Alternative 5 is much more complex and difficult than Alternative 4, and it will require much more time. In addition to all the components that are included in Alternative 4, excavation/dredging of sediments at Brier Creek Reservoir and Lake Crabtree is included in Alternative 5. Dredging is a specialized technology, which requires advanced planning, selection of the proper dredging method, and detailed remedial design. Dewatering and treatment of water are also significant design and cost components of the dredging alternative.

During the implementation of Alternatives 4 and 5 a pre-remediation mussel study will be conducted to determine if the endangered/threatened species exists in the streams to be excavated. Consultation with the respective federal and state agencies will be required prior to the commencement of the excavation activities.

Some portions of OUI consist of wetlands and floodplains. Coordination with federal agencies will be required to ensure that the impact on these areas will be minimal. Threatened bald eagles nest at the Lake Crabtree and forage at Lake Crabtree and Brier Creek Reservoir. State endangered/threatened mussel species have been reported in the nearby Umstead State Park, which is part of the Crabtree Creek watershed.

The Crabtree Creek Recreational Demonstration Area (Umstead State Park) is a historical site listed in the National Register of Historic Places. Precautionary measures will be taken to minimize harm to historic property to the extent practicable during remedial actions conducted in this area and in the vicinity. Consultation with federal and state historic and archeological agencies will be

necessary before initiating any activities in the vicinity of this area.

Costs include estimated capital and annual operations and maintenance (O&M) costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value.

There are no capital costs associated with Alternative 1. However, 5-year reviews will be conducted, as required by CERCLA. For costing purposes, it is assumed that 5-year reviews would be conducted for 30 years.

For Alternative 2, in addition to the 5-year review, yearly operation and maintenance costs for community outreach and educational programs are included for 30 years. For Alternative 3, all the costs in Alternative 2 plus yearly MNR monitoring costs are included for 30 years.

Alternative 4 includes the same costs associated with Alternative 3 plus the capital costs associated with excavation and off-site disposal of sediment from Reaches B, C, D, and lower Brier Creek (because remedial actions would last for less than 6 months, there are no recurring costs associated with this alternative). Capital costs of remediation include pre-remediation sampling, mobilization/demobilization, construction of access roads, temporary staging areas, excavation, off-site transport and disposal, and site restoration.

For Alternative 5, in addition to the costs associated with Alternative 4, dredging and off-site disposal of sediments in Brier Creek Reservoir and Lake Crabtree are included. There are additional components related to dredging operations, for example, dewatering and effluent treatment.

For Alternatives 4 and 5, the MNR monitoring costs were included for only 15 years, because it is expected that the clean up levels would be met in less than 15 years.

The present-worth costs for the remedial alternatives are summarized below:

Alternative 1:	\$ 332,000
Alternative 2:	\$ 476,000
Alternative 3:	\$ 2,247,000
Alternative 4:	\$ 4,989,000
Alternative 5:	\$ 540,982,000

Alternative 5 would be extremely expensive, considering the large volume of sediments to be removed. According to modeling results, the time difference in achieving the clean up levels associated with fish consumption in Alternative 4 and 5 is only a few years. But due to the complexity of Alternative 5, it is estimated that planning, design and implementation of this alternative would require a considerably greater amount of time than Alternative 4. Therefore, removing a larger amount of sediments does not necessarily correspond to a shorter amount of time to achieve clean up goals. Based on the foregoing, it would be far more cost-effective to consider Alternative 4 over Alternative 5.

State/Support Agency Acceptance considers whether the State agrees with the EPA's analyses and recommendations, as described in the RI/FS and Proposed Plan.

The Waste Management Division and the NCDENR (North Carolina Department of Environment and Natural Resources) agree with the preferred alternative.

Community Acceptance Community acceptance of the preferred alternative will be evaluated after the public comment period and will be described in the Record of Decision (ROD) for the Site.

SUMMARY OF THE PREFERRED ALTERNATIVE

The preferred alternative is Alternative 4: Excavation and Off-Site Disposal of Sediments in Reaches B, C, and D, and Lower Brier Creek; Monitored Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek; and Institutional Controls. The preferred alternative includes:

- Continue existing North Carolina fish consumption advisories and signs.
- Conduct educational and community outreach programs.
- Conduct pre-excavation sampling and endangered mussel study.
- Excavate sediments in Reaches B, C, and D and lower Brier Creek, and transport sediments off-site for appropriate disposal.
- Site and stream restoration.
- MNR - Periodic monitoring of sediments and aquatic biota in the Brier Creek Reservoir, Lake Crabtree, and Lower Crabtree Creek.
- Conduct Five-year review.

Based on the information available at this time, EPA and the NC DENR believe the preferred alternative provides the best balance of tradeoffs of all the alternatives with respect to the balancing and modifying criteria. EPA expects the preferred alternative to satisfy the statutory requirements of CERCLA §121(b), which include that the alternative would be protective of human health and the environment, would comply with ARARs, would be cost-effective, and would utilize permanent solutions. The preferred alternative can change in response to public comment or new information.

EPA provides information regarding the cleanup of the Ward Transformer Site to the public through Emails, Fact Sheets, public meetings, and the Administrative Record file for the Site. EPA and the State encourage the public to gain a more comprehensive understanding of the Site and the Superfund activities that have been conducted at the Site.

Information regarding the public comment period, public meeting and the locations of the Administrative Record files, are provided on the front page of this Proposed Plan. For further information on the Ward Transformer Site, please contact:

Luis E. Flores, Remedial Project Manager
(404) 562-8807 or E-mail: flores.luis@epa.gov

Or

Angela Miller, Community Involvement Coordinator
(404) 562-8561 or E-mail: miller.angela@epa.gov

US EPA
61 Forsyth Street, SW
Atlanta, GA 30303-8960

USE THIS SPACE TO WRITE YOUR COMMENTS

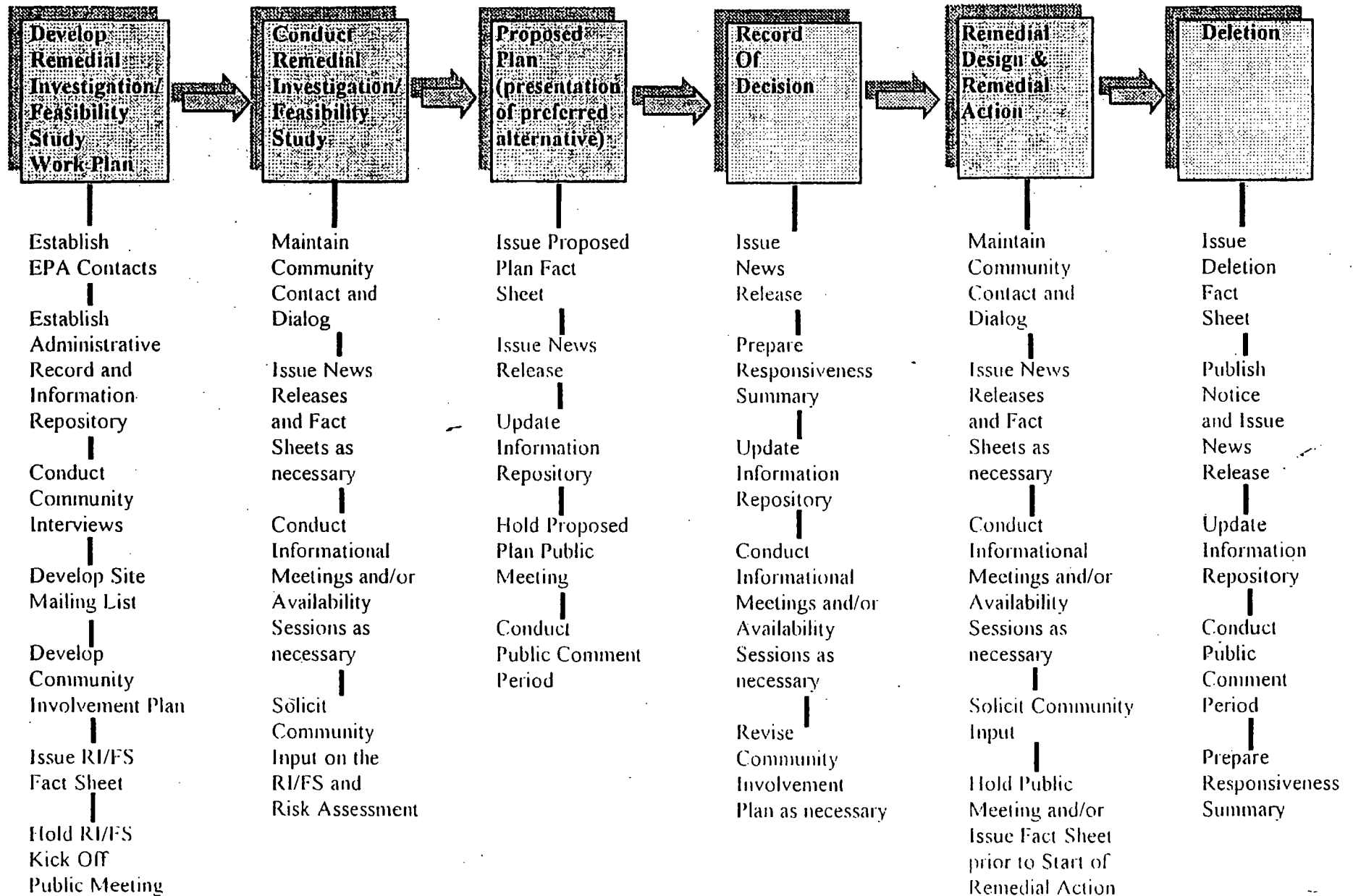
Your input on this Proposed Plan for the Ward Transformer Site OU1 is important to EPA. Comments provided by the public are valuable in helping EPA select a final cleanup remedy for the Site. You may use the space below to write your comments. Comments must be postmarked by September 4, 2007. If you have any questions about the comment period, please contact Luis E. Flores at (404) 562-8807. Those with electronic communication capabilities may submit their comments to EPA via the internet to *flores.luis@epa.gov*.

Comments may also be mailed to:

Luis E. Flores
Superfund Division-SRSEB
US Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, GA 30303

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Community Involvement Activities and Opportunities During the Superfund Process



What is a Remedial Investigation?

A Remedial Investigation (RI) is an intensive study of a Superfund site. It is carried out by an EPA team of health and environmental specialists such as hydrogeologists, engineers, and biologists to determine the exact nature of the hazardous wastes, the nature of threat, if any, that may be posed to human health or the environment, and the extent of any contamination present at a site.

Typically, the RI report will describe the type and extent of on-site and off-site contamination, effects of contamination on surface water and groundwater, and the degree of contamination in the soil. To achieve these findings, EPA personnel or the Potentially Responsible Party (PRP) contractor, supervised by EPA, will take numerous samples of the soil, stream sediment, and surface water at various locations at the site. In addition, monitoring wells will be installed to sample groundwater, and where necessary an ecological study will be conducted.

These samples are sent to laboratories to be analyzed for various contaminants, i.e., metals, minerals, organics, inorganics, etc.. Sampling data also will be used to determine whether or not the contaminants are moving from the site, where they might go, and what sensitive areas may be affected. Based on this information, a Risk Assessment is conducted to estimate the potential impact of the contaminants on human health and the environment. All of the data gathered through this investigation is compiled into an RI report. EPA determines from this report what the contaminants of concern at a site are and how they will be addressed.

What is a Feasibility Study?

The Feasibility Study (FS) is the portion of the process where EPA environmental engineers and other technical staff consider, describe, and evaluate options for cleaning up the site based on the RI information.

As required by the Superfund program, the possible treatment options under consideration need to meet nine specific criteria in order to be acceptable. These criteria are:

- Overall protection of human health and the environment; adequate elimination, reduction or control of all current and likely potential risks posed by the site.
- Compliance with applicable and/or relevant Federal or State public health or environmental standards, unless a waiver is warranted where protection is ensured.
- Long-term effectiveness and permanence of the remedy.
- Reduction of the toxicity (harmfulness), mobility (potential to move), or volume of hazardous substances or contaminants.
- Short-term effectiveness, or the impacts a remedy might have on the community, workers, or the environment during the course of implementing it.
- Implementability, the capability to carry out the remedy selected.
- Cost-effectiveness, considering the cost of construction, operation, and maintenance of it over the life of the project, including remedial costs should the remedy fail.
- Acceptance by the State.
- Acceptance by the community.

The nine criteria for selecting an alternative will vary in importance depending upon site-specific conditions.

Appendix G

Statement of Work

**STATEMENT OF WORK FOR THE
REMEDIAL DESIGN AND REMEDIAL ACTION
FOR OPERABLE UNIT 1
AT THE WARD TRANSFORMER SUPERFUND SITE**

I. INTRODUCTION

This Statement of Work (SOW) outlines the remaining work to be performed for Operable Unit 1 (OU-1) of the remedy at the Ward Transformer Superfund Site in Raleigh, Wake County, North Carolina (Site). The work outlined is intended to complete the full implementation of the remedy as described in the Record of Decision (ROD) for the Site, dated September 29, 2008, and to achieve the Performance Standards set forth in the ROD and this SOW. The requirements of this SOW will be further detailed in work plans and other documents to be submitted for approval as set forth in this SOW. It is not the intent of this document to provide task specific engineering or geological guidance. The definitions set forth in Section IV of the Consent Decree (CD) shall also apply to this SOW unless expressly provided otherwise herein.

The OU-1 work completed to date was performed from 2011-2016 by a group of parties that are Settling Defendants under the CD. This work included completion of the Remedial Design Work Plan, Phase I Pre-Design Investigation Work Plan; Phase II Pre-Design Investigation Work Plan, Phase II Pre-Design Investigation Initial Sampling Report, and Delineation Refinement Sampling Plan. The sampling results from these activities will provide the basis of the Remedial Design to be completed under this SOW.

Pursuant to the CD, the Performing Settling Defendants (PSDs) are responsible for performing the remaining work to implement the selected remedy. EPA shall conduct oversight of PSDs' activities throughout the performance of the Work. PSDs shall assist EPA in conducting oversight activities.

EPA review or approval of a task or deliverable shall not be construed as a guarantee as to the adequacy of such task or deliverable. If EPA modifies a deliverable pursuant to Paragraph 13 of the CD, such deliverable as modified shall be deemed approved by EPA for purposes of this SOW. A summary of the major deliverables to be submitted for the Work is attached.

II. OVERVIEW OF THE REMEDY

The Remedial Action Objectives (RAO) are to:

- Minimize potential downstream migration of PCB-contaminated soil and sediment.
- Reduce PCB levels in fish tissue to levels that allow for unlimited consumption.

III. SELECTED REMEDY

The remedy includes:

- Continue or enhance existing North Carolina fish consumption advisories and signs.
- Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.
- Restore site and stream to pre-remediation conditions.
- Implement Monitored Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.
- Conduct periodic monitoring of sediment and aquatic biota.
- Implement Institutional Controls.
- Conduct Five-year reviews.

A. Components

A description of each component is provided below:

- *Continue or enhance existing fish consumption advisories and signs.*

Fish consumption advisories and signs would continue to be in place until PCB concentrations in fish are below the remediation goal (0.05 mg/kg). This component of the remedy would also include the implementation and posting of additional fish consumption advisories and signs, or any modifications to the existing ones, as needed. The continuance or enhancement of fish advisories and signs would help reduce the potential risks to humans through fish consumption.

- *Excavate sediment/soil from Reaches B, C, D, and lower Brier Creek, and transport sediment/soil off-site for appropriate disposal.*

Based on the results of the pre-excavation sampling program, sediments and flood plain soil from Reaches B, C, D, and lower Brier Creek will be excavated to PCB levels below 1 mg/kg. Excavated sediments/soil will be transported and properly disposed of off-site. An excavation verification plan will be developed as part of the Remedial Design. Verification samples will be collected to ensure the 1 mg/kg remediation goal is achieved.

Prior to the excavation of stream sediments, sections of the stream flow could be blocked off and water could be bypassed through pipes running parallel to the blocked stream section. Major activities associated with this alternative would include stream diversion, construction of access roads to transport equipment and haul excavated material, excavation of sediments/soil,

construction of temporary staging areas, transport excavated sediment/soil off-site to be disposed properly, and conduct verification sampling.

Precautions would be taken to minimize any impact on identified local endangered and threatened species. Also, activities would be conducted in accordance with the laws and regulations associated with floodplain management, protection of wetlands, preservation of historic and archaeological landmarks, construction, and erosion and sediment control.

- ***Restore site and stream to pre-remediation conditions.***

To the extent feasible, all disturbed areas would be restored to pre-remediation conditions. This includes replenishment and revegetation of areas where sediment and soil was removed, and restoration of areas that were disturbed during remediation activities, including temporary staging areas, and areas cleared for access roads.

- ***Implement Monitored Natural Recovery (MNR) in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek.***

Monitored Natural Recovery, which allows natural processes to achieve remediation goals would be implemented in Brier Creek Reservoir, Lake Crabtree and Lower Crabtree Creek. MNR is a sediment remedy that uses ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment, thereby reducing potential risks to human and/or ecological receptors.

Periodic monitoring of sediment would be conducted to assess PCB concentrations in sediment over time. In addition, monitoring of aquatic biota (fish sampling) would be conducted to support future decisions regarding fish consumption advisories. An MNR sampling program would be developed and implemented, in accordance with EPA sediment guidance for evaluating Natural Recovery remedies, to document lines of evidence of natural recovery in sediment. MNR would be conducted until remediation goals are achieved.

- ***Conduct periodic monitoring of sediment and aquatic biota.***

Periodic monitoring of sediment and aquatic biota (fish sampling) would be conducted. A monitoring program would be developed to assess the remedy and support future decisions regarding fish consumption advisories and protection of ecological receptors. Periodic monitoring would be conducted until remediation goals are achieved.

- ***Implement Institutional Controls.***

As appropriate and necessary, Institutional Controls would be implemented to ensure short and long term protection of human health and the environment. Continue or enhance existing fish consumption advisories and signs was identified as an Institutional Control measure appropriate for the Site. Other Institutional Control measures might be identified and implemented.

- *Conduct five-year reviews.*

Five-year reviews would be conducted to evaluate the implementation and performance of the selected remedy, and in order to determine if the remedy continues to be protective of human health and the environment. Five-year reviews would be conducted as required under CERCLA.

B. Performance Standards

PSDs shall meet all Performance Standards, as defined in the attached Record of Decision.

PSDs shall implement the remedy and all its components until they have demonstrated compliance with the respective Performance Standards, in accordance with the Performance Standards Verification Plan.

C. Compliance Testing

PSDs shall perform compliance testing to ensure that all Performance Standards are met. The excavations and disposal material shall be tested in accordance with the Performance Standard Verification Plan developed pursuant to Task III of this SOW.

IV. COMMUNITY INVOLVEMENT

A. Community Involvement Responsibilities

1. EPA has the lead responsibility for developing and implementing community involvement activities at the Site. Previously [during the RI/FS phase], EPA developed a Community Involvement Plan (CIP) for the Site. Pursuant to 40 C.F.R. § 300.435(c), EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities during the Work that are not already addressed or provided for in the existing CIP, including, if applicable, any Technical Assistance Grant (TAG), any use of the Technical Assistance Services for Communities (TASC) contract, and/or any Technical Assistance Plan (TAP).

2. If requested by EPA, PSDs shall participate in community involvement activities, including participation in (1) the preparation of information regarding the Work for dissemination to the public, with consideration given to including mass media and/or Internet notification, and (2) public meetings that may be held or sponsored by EPA to explain activities at or relating to the Site. PSDs' support of EPA's community involvement activities may include providing online access to initial submissions and updates of deliverables to (1) any Community Advisory Groups, (2) any Technical Assistance Grant recipients and their advisors, and (3) other entities to provide them with a reasonable opportunity for review and comment. EPA may describe in its CIP PSDs' responsibilities for community involvement activities. All community involvement activities conducted by PSDs at EPA's request are subject to EPA's oversight.

Upon EPA's request, PSDs shall establish a community information repository at or near the Site to house one copy of the administrative record.

3. PSDs' CI Coordinator. If requested by EPA, PSDs shall, within 15 days, designate and notify EPA of PSDs' Community Involvement Coordinator (PSDs' CI Coordinator). PSDs may hire a contractor for this purpose. PSDs' notice must include the name, title, and qualifications of the PSDs' CI Coordinator. PSDs' CI Coordinator is responsible for providing support regarding EPA's community involvement activities, including coordinating with EPA's CI Coordinator regarding responses to the public's inquiries about the Site.

V. PLANNING AND DELIVERABLES

The specific scope of this work shall be documented by PSDs in a Remedial Design (RD) Work Plan and a Remedial Action (RA) Work Plan. Plans, specifications, submittals, and other deliverables shall be subject to EPA review and approval in accordance with Section VI of the CD.

PSDs shall submit a technical memorandum documenting any need for additional data along with the proposed Data Quality Objectives (DQOs) whenever such requirements are identified. PSDs are responsible for fulfilling additional data and analysis needs identified by EPA during the RD/RA process consistent with the general scope and objectives of this SOW.

PSDs shall perform the following tasks:

TASK I - REMEDIAL DESIGN

The Remedial Design shall provide the technical details for implementation of the Remedial Action in accordance with currently accepted environmental protection technologies and standard professional engineering and construction practices. The design shall include clear and comprehensive design plans and specifications.

A. Remedial Design Planning

PSDs shall implement the RD Work Plan approved by EPA in June 2012 in accordance with the design management schedule contained therein. Plans, specifications, submittals, and other deliverables shall be subject to EPA review and approval in accordance with Section VI of the CD. Review and/or approval of design submittals only allow PSDs to proceed to the next step of the design process. It does not imply acceptance of later design submittals that have not been reviewed, nor that the remedy, when constructed, will meet Performance Standards.

B. Preliminary Design

Preliminary Design shall begin with initial design and shall end with the completion of approximately 30 percent of the design effort. At this stage, PSDs shall field verify, as necessary, the existing conditions of the Site. The technical requirements of the Remedial Action shall be addressed and outlined so that they may be reviewed to determine if the final design will provide

an effective remedy. Supporting data and documentation shall be provided with the design documents defining the functional aspects of the project. EPA approval of the Preliminary Design is required before proceeding with further design work, unless specifically authorized by EPA. In accordance with the design management schedule established in the approved Remedial Design Work Plan, PSDs shall submit to EPA the Preliminary Design submittal which shall consist of the following:

1. Results of Data Acquisition Activities

Data gathered during the project planning phase shall be compiled, summarized, and submitted along with an analysis of the impact of the results on design activities. In addition, surveys conducted to establish topography, rights-of-way, easements, and utility lines shall be documented. Utility requirements and acquisition of access, through purchases or easements that are necessary to implement the RA shall also be discussed.

2. Design Criteria Report

The concepts supporting the technical aspects of the design shall be defined in detail and presented in this report. Specifically, the Design Criteria Report shall include the preliminary design assumptions and parameters, including:

- Waste characterization
- Pretreatment requirements
- Volume of each media requiring treatment
- Treatment schemes (including all media and by-products)
- Input/output rates
- Influent and effluent qualities
- Materials and equipment
- Performance Standards
- Long-term monitoring requirements

3. Preliminary Plans and Specifications

PSDs shall submit an outline of the required drawings, including preliminary sketches and layouts, describing conceptual aspects of the design, unit processes, etc. In addition, an outline of the required specifications, including Performance Standards, shall be submitted. Construction drawings shall reflect organization and clarity, and the scope of the technical specifications shall be outlined in a manner reflecting the final specifications.

4. Plan for Satisfying Permitting Requirements

All activities must be performed in accordance with the requirements of all applicable federal and state laws and regulations. Any off-site disposal shall be in compliance with Section 121(d)(3) of CERCLA, 42 U.S.C. 9621(d)(3), with the U.S. EPA "Off-Site Policy," 40 CFR § 300.440 (50 Fed. Reg. 49200, September 22, 1993), and with all other applicable Federal, State and local requirements. The plan shall identify the off-site disposal/discharge permits that are

required, the time required to process the permit applications, and a schedule for submittal of the permit applications.

C. Prefinal/Final Design

PSDs shall submit the Prefinal Design when the design work is approximately 90 percent complete in accordance with the approved design management schedule. PSDs shall address comments generated from the Intermediate Design Review and clearly show any modification of the design as a result of incorporation of the comments. Essentially, the Prefinal Design shall function as the draft version of the Final Design. After EPA review and comment on the Prefinal Design, the Final Design shall be submitted along with a memorandum indicating how the Prefinal Design comments were incorporated into the Final Design. All Final Design documents shall be certified by a Professional Engineer registered in the State of North Carolina. EPA written approval of the Final Design is required before initiating the RA, unless specifically authorized by EPA.

The following items shall be submitted with or as part of the Prefinal/Final Design:

1. Complete Design Analyses - The selected design shall be presented along with an analysis supporting the design approach. Design calculations shall be included.
2. Final Plans and Specifications - A complete set of construction drawings and specifications shall be submitted which describe the selected design.
3. Final Construction Schedule - PSDs shall submit a final construction schedule to EPA for approval.
4. Construction Cost Estimate - An estimate within +15 percent to -10 percent of actual construction costs shall be submitted.

D. Institutional Controls Implementation and Assurance Plan

Concurrent with the Pre-Final Design, PSDs shall submit the Institutional Controls Implementation and Assurance Plan (ICIAP). The ICIAP will be a plan to implement the Institutional Controls set forth in the ROD. The ICIAP shall include, but not be limited to:

- a description of the areas where human activities should be restricted, including legal descriptions for such areas, sample maps, and a plan for preparing final survey maps;
- a description of the pathways for potential human exposure to Waste Materials that may remain during and/or after completion of construction of the RA;
- a list of properties where Proprietary Controls are needed;
- a description of the proposed Institutional Controls and their purpose;
- a description of the proposed duration of each Institutional Control and an explanation for such duration;
- a schedule for implementing each Institutional Control;
- a schedule for completing title work;

- draft Proprietary Controls enforceable under state law to implement the proposed land/water use restrictions;
- a description of the authority of each affected property owner to implement each Proprietary Control, including title insurance commitments or other title evidence acceptable to EPA for proposed Proprietary Controls;
- a description of all prior liens and encumbrances existing on any real property that may affect the Proprietary Controls or the protectiveness of the remedy, and a plan for the release or subordination of any such liens and encumbrances (unless EPA waives the release or subordination of such liens or encumbrances);
- a plan for monitoring, maintaining, reporting on, and insuring the continued efficacy of the Institutional Controls and a contingency plan in the event ICs are ineffective; and
- a schedule for annual certifications regarding whether the Institutional Controls remain in place, regarding whether the Institutional Controls have been complied with, and regarding enforcement of the Institutional Controls.

The ICIAP will be effective upon EPA's approval.

TASK II - REMEDIAL ACTION

Remedial Action shall be performed by PSDs to implement the response actions selected in the ROD.

A. Remedial Action Planning

Concurrent with the submittal of the Prefinal/Final Design, PSDs shall submit a draft Remedial Action (RA) Work Plan, Project Delivery Strategy, a Construction Management Plan, a Construction Quality Assurance Plan, and a Construction Health and Safety Plan/Contingency Plan. The RA Work Plan, Project Delivery Strategy, Construction Management Plan, and Construction Quality Assurance Plan must be reviewed and approved by EPA and the Construction Health and Safety Plan/Contingency Plan reviewed by EPA prior to the initiation of the Remedial Action.

Upon approval of the Final Design and the RA Work Plan, PSDs shall implement the RA Work Plan in accordance with the construction management schedule. Significant field changes to the RA as set forth in the RA Work Plan and Final Design shall not be undertaken without the approval of EPA. The RA shall be documented in enough detail to produce as-built construction drawings after the RA is complete. Deliverables shall be submitted to EPA for review and approval. Review and/or approval of submittals does not imply acceptance of later submittals that have not been reviewed, nor that the remedy, when constructed, will meet Performance Standards.

1. RA Work Plan

A Work Plan which provides a detailed plan of action for completing the RA activities shall be submitted to EPA for review and approval. The objective of this work plan is to provide for the safe and efficient completion of the RA. The Work Plan shall be developed in

conjunction with the Project Delivery Strategy, Construction Management Plan, the Construction Quality Assurance Plan, and the Construction Health and Safety Plan/Contingency Plan, although each plan may be delivered under separate cover. The Work Plan shall include a comprehensive description of the work to be performed and the Final Construction schedule for completion of each major activity and submission of each deliverable.

Specifically, the RA Work Plan shall present the following:

- A detailed description of the tasks to be performed and a description of the work products to be submitted to EPA. This includes the deliverables set forth in the remainder of Task III.
- A schedule for completion of each required activity and submission of each deliverable required by this SOW.
- A project management plan, including provision for monthly reports to EPA and meetings and presentations to EPA at the conclusion of each major phase of the RA. EPA's Project Coordinator and the PSDs' Project Coordinator will meet, at a minimum, on a quarterly basis, unless EPA determines that such meeting is unnecessary.
- At EPA's request, PSDs shall assist EPA in preparing and disseminating information to the public regarding the RA work to be performed.

2. Project Delivery Strategy

PSDs shall submit a document to EPA for review and approval describing the strategy for delivering the project. This document shall address the management approach for implementing the Remedial Action, including procurement methods and contracting strategy, phasing alternatives, and contractor and equipment availability concerns. If the construction of the remedy is to be accomplished by PSDs' "in-house" resources, the document shall identify those resources.

3. Construction Management Plan

A Construction Management Plan shall be developed to indicate how the construction activities are to be implemented and coordinated with EPA during the RA. PSDs shall designate a person to be a Remedial Action Coordinator and its representative on-site during the Remedial Action, and identify this person in the Plan. This Plan shall also identify other key project management personnel and lines of authority, and provide descriptions of the duties of the key personnel along with an organizational chart. In addition, a plan for the administration of construction changes and EPA review and approval of those changes shall be included.

4. Construction Quality Assurance Plan

PSDs shall develop and implement a Construction Quality Assurance Program to ensure, with a reasonable degree of certainty, that the completed Remedial Action meets or exceeds all design criteria, plans and specifications, and Performance Standards. The Construction Quality Assurance Plan shall incorporate relevant provisions of the Performance Standards Verification

Plan (see Task III). At a minimum, the Construction Quality Assurance Plan shall include the following elements:

- A description of the quality control organization, including a chart showing lines of authority, identification of the members of the Independent Quality Assurance Team (IQAT), and acknowledgment that the IQAT will implement the control system for all aspects of the work specified and shall report to the project coordinator and EPA. The IQAT members shall be representatives from testing and inspection organizations and/or the Supervising Contractor and shall be responsible for the QA/QC of the Remedial Action. The members of the IQAT shall have a good professional and ethical reputation, previous experience in the type of QA/QC activities to be implemented and demonstrated capability to perform the required activities. They shall also be independent of the construction contractor.
- The name, qualifications, duties, authorities, and responsibilities of each person assigned a QC function.
- Description of the observations and control testing that will be used to monitor the construction and/or installation of the components of the Remedial Action. This includes information which certifies that personnel and laboratories performing the tests are qualified and the equipment and procedures to be used comply with applicable standards. Any laboratories to be used shall be specified. Acceptance/Rejection criteria and plans for implementing corrective measures shall be addressed. A schedule for managing submittals, testing, inspections, and any other QA function (including those of contractors, subcontractors, fabricators, suppliers, purchasing agents, etc.) that involve assuring quality workmanship, verifying compliance with the plans and specifications, or any other QC objectives. Inspections shall verify compliance with all environmental requirements and include, but not be limited to, air quality and emissions monitoring records and waste disposal records, etc.
- Reporting procedures and reporting format for QA/QC activities including such items as daily summary reports, schedule of data submissions, inspection data sheets, problem identification and corrective measures reports, evaluation reports, acceptance reports, and final documentation.
- A list of definable features of the work to be performed. A definable feature of work is a task which is separate and distinct from other tasks and has separate control requirements.

5. Construction Health and Safety Plan/Contingency Plan

PSDs shall prepare a Construction Health and Safety Plan/Contingency Plan in conformance with PSDs' health and safety program, and in compliance with OSHA regulations and protocols. The Construction Health and Safety Plan shall include a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. EPA will not approve PSDs' Construction Health and Safety Plan/Contingency Plan, but rather EPA will review it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment. This plan shall include a

Contingency Plan and incorporate Air Monitoring and Spill Control and Countermeasures Plans if determined by EPA to be applicable for the Site. The Contingency Plan is to be written for the onsite construction workers and the local affected population. It shall include the following items:

- Name of person who will be responsible in the event of an emergency incident.
- Plan for initial site safety indoctrination and training for all employees, name of the person who will give the training and the topics to be covered.
- Plan and date for meeting with the local community, including local, state and federal agencies involved in the cleanup, as well as the local emergency squads and the local hospitals.
- A list of the first aid and medical facilities including, location of first aid kits, names of personnel trained in first aid, a clearly marked map with the route to the nearest medical facility, all necessary emergency phone numbers conspicuously posted at the job site (i.e., fire, rescue, local hazardous material teams, National Emergency Response Team, etc.)
- Plans for protection of public and visitors to the job site.
- A Spill Control and Countermeasures Plan which shall include the following:
 - Contingency measures for potential spills and discharges from materials handling and/or transportation.
 - A description of the methods, means, and facilities required to prevent contamination of soil, water, atmosphere, and uncontaminated structures, equipment, or material by spills or discharges.
 - A description of the equipment and personnel necessary to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage. This collected spill material must be properly disposed of.
 - A description of the equipment and personnel to perform decontamination measures that may be required for previously uncontaminated structures, equipment, or material.

6. Emergency Response and Reporting

a. **Emergency Response and Reporting.** If any event occurs during performance of the Work that causes or threatens to cause a release of Waste Material on, at, or from the Site and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, PSDs shall: (1) immediately take all appropriate action to prevent, abate, or minimize such release or threat of release; (2) immediately notify the authorized EPA officer (as specified in ¶ 6.b) orally; and (3) take such actions in consultation with the authorized EPA officer and in accordance with all applicable provisions of the Health

and Safety Plan, the Emergency Response Plan, and any other deliverable approved by EPA under the SOW.

b. **Release Reporting.** Upon the occurrence of any event during performance of the Work that PSDs are required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, PSDs shall immediately notify the authorized EPA officer orally.

c. The “authorized EPA officer” for purposes of immediate oral notifications and consultations under ¶ 6.a and ¶ 6.b is the EPA Project Coordinator, the EPA Alternate Project Coordinator (if the EPA Project Coordinator is unavailable), or the Director of the Superfund Division, EPA Region 4 (if neither EPA Project Coordinator is available).

d. For any event covered by ¶ 6.a and ¶ 6.b, PSDs shall: (1) within 14 days after the onset of such event, submit a report to EPA describing the actions or events that occurred and the measures taken, and to be taken, in response thereto; and (2) within 30 days after the conclusion of such event, submit a report to EPA describing all actions taken in response to such event.

e. The reporting requirements under ¶ 6 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

B. Prefinal Construction Inspection

Upon preliminary project completion PSDs shall notify EPA for the purpose of conducting a Prefinal Construction Inspection. Participants should include the Project Coordinators, Supervising Contractor, and Construction Contractor. The Prefinal Inspection shall consist of a walk-through inspection of the entire project site. The objective of the inspection is to determine whether the construction is complete and consistent with the SOW. Any outstanding construction items discovered during the inspection shall be identified and noted on a punch list. A Prefinal Construction Inspection Report shall be submitted by PSDs which outlines any outstanding construction items, actions required to resolve the items, completion date for the items, and an anticipated date for the Final Inspection.

C. Final Construction Inspection

Upon completion of all outstanding construction items, PSDs shall notify EPA for the purpose of conducting a Final Construction Inspection. The Final Construction Inspection shall consist of a walk-through inspection of the entire project site. The Prefinal Construction Inspection Report shall be used as a check list with the Final Construction Inspection focusing on the outstanding construction items identified in the Prefinal Construction Inspection. Confirmation shall be made during the Final Construction Inspection that all outstanding items have been resolved. Any outstanding construction items discovered during the inspection still requiring correction shall be identified and noted on a punch list. If any items are still unresolved, the inspection shall be considered to be a Prefinal Construction Inspection requiring another Prefinal Construction Inspection Report and subsequent Final Construction Inspection.

D. Final Construction Report

Within thirty (30) days following the conclusion of the Final Construction Inspection, PSDs shall submit a Final Construction Report. EPA will review the draft report and will provide comments to PSDs. The Final Construction Report shall include the following:

- Brief description of how outstanding items noted in the Prefinal Inspection were resolved;
- Explanation of modifications made during the RA to the original RD and RA Work Plans and why these changes were made;
- Synopsis of the construction work defined in the SOW and certification that the construction work has been completed.

1. Remedial Action Report

Within 30 days after PSDs conclude that the Remedial Action has been fully performed and the Performance Standards have been attained, PSDs shall so certify to the United States and shall schedule and conduct a pre-certification inspection to be attended by EPA and PSDs. If after the pre-certification inspection PSDs still believe that the Remedial Action has been fully performed and the Performance Standards have been attained, PSDs shall submit a Remedial Action (RA) Report in accordance with EPA guidance “Closeout Procedures for NPL Sites” OERR 540-R-98-016. The RA Report shall include the following:

- A copy of the Final Construction Report;
- Synopsis of the work defined in this SOW and a demonstration in accordance with the Performance Standards Verification Plan that Performance Standards have been achieved;
- Certification that the Remedial Action has been completed in full satisfaction of the requirements of this SOW, and;
- A description of how PSDs will implement any remaining part of the EPA approved Operation and Maintenance Plan.

After EPA review, PSDs shall address any comments and submit a revised report, if needed. The Remedial Action shall not be considered complete until EPA approves the RA Report.

TASK III - PERFORMANCE MONITORING

Performance monitoring shall be conducted to ensure that all Performance Standards are met.

A. Performance Standards Verification Plan

The purpose of the Performance Standards Verification Plan is to provide a mechanism to ensure that both short-term and long-term Performance Standards for the Remedial Action are

met. Guidance documents used in developing the Sampling and Analysis Plan during the Remedial Design phase shall be used. PSDs shall submit a Performance Standards Verification Plan with the Preliminary Design. Once approved, PSDs shall implement the Performance Standards Verification Plan on the approved schedule. The Performance Standards Verification Plan shall include:

- The Performance Standards Verification Field Sampling and Analysis Plan that provides guidance for all fieldwork by defining in detail the sampling and data gathering methods to be used. The Performance Standards Verification Field Sampling and Analysis Plan shall be written so that a field sampling team unfamiliar with the Site would be able to gather the samples and field information required.
- The Performance Standards Verification Quality Assurance/Quality Control plan that describes the quality assurance and quality control protocols which will be followed in demonstrating compliance with Performance standards.

Specification of those tasks to be performed by PSDs to demonstrate compliance with the Performance Standards and a schedule for the performance of these tasks.

VI. SCHEDULES

Applicability and Revisions. All deliverables and tasks required under this SOW must be submitted or completed by the deadlines or within the time durations listed in the RD and RA Schedules set forth below. PSDs may submit proposed revised RD Schedules or RA Schedules for EPA approval. Upon EPA's approval, the revised RD and/or RA Schedules supersede the RD and RA Schedules set forth below, and any previously-approved RD and/or RA Schedules.

RD Schedule

	Description of Deliverable, Task	¶ Ref.	Deadline
1	Preliminary (30%) RD	Task I-B	90 days after EPA approval of Final Pre-Design Investigation Report (PDIR)
2	Intermediate (60%) RD		120 days after EPA approval of Preliminary (30%) RD
3	Pre-final (90%) RD	Task I-C	90 days after EPA comments on Intermediate RD
4	Final (100%) RD	Task I-C	60 days after EPA comments on Pre-final RD

RA Schedule

	Description of Deliverable / Task	¶ Ref.	Deadline
1	Award RA contract	Task II-A	60 days after EPA Notice of Authorization to Proceed with RA
2	Remedial Action Work Plan (RAWP)	Task II-A	120 days after Award of RA contract
3	Permitting	Task II-A	90 days after Approval of RAWP
4	Pre-Construction Conference	Task II-A	90 days after Approval of RAWP
5	Start of Construction	Task II-A	45 days after Pre-Construction Conference
6	Completion of Construction	Task II-A	
7	Prefinal Construction Inspection	Task II-B	30 days after completion of construction
8	Prefinal Construction Inspection Report	Task II-B	60 days after completion of Prefinal Inspection
9	Final Construction Inspection	Task II-C	30 days after Completion of Work identified in Prefinal Inspection Report
10	RA Final Inspection Report	Task II-D	30 days after Final Inspection
11	Work Completion Report	Task III	

At any time PSDs send a deliverable to EPA, they shall send a courtesy copy of such deliverable to the State:

Project Manager, Ward Transformer Site
NC Department of Environmental Quality
Division of Waste Management - Superfund Section
1646 Mail Service Center
Raleigh, NC 27699-1646

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RD/RA process. PSDs shall review these guidance documents and shall use the information provided therein in performing the RD/RA and preparing all deliverables under this SOW.

1. "National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule," Federal Register 40 C.F.R. Part 300, March 8, 1990.
2. "Remedial Design and Remedial Action Guidance," U.S. EPA, Office of Emergency and Remedial Response, June 1995, OSWER Directive No. 9355.0-04B, EPA 540/R-95/059.
3. "EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties — Interim Final" U.S. EPA, Office of Emergency and Remedial Response, April 1990, OSWER Directive No. 9355.5-01.
4. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final," U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 355.3-01.
5. "A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
6. "EPA NEIC Policies and Procedures Manual," EPA-330/9-78-001-R, May 1978, revised November 1984.
7. "Guidance for Quality Assurance Project Plans," EPA/240/R-02/009, December 2002.
8. "EPA Requirements for Quality Assurance Project Plans," EPA/240/B-01/003, March 2001.
9. "Guidance on Systematic Planning Using the Data Quality Objectives Process," EPA/240/B-06/001, February 2006.
10. "Systematic Planning: A Case Study for Hazardous Waste Site Investigations," EPA/240/B-06/004, February 2006.
11. "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," OSWER No. 9200.1-85, EPA 540-R-08-005, January 13, 2009.
12. "Contract Laboratory Program Guidance for Field Samplers," OSWER 9240.0-47, EPA 540-R-09-03, January 2011.

13. "USEPA Contract Laboratory Program Statement of Work for Organic Analysis," SOM01.2, May 2005.
14. "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods," ISM01.2, January 2010.
15. "Quality in the Constructed Project: A Guideline for Owners, Designers, and Constructors, Volume 1, Preliminary Edition for Trial Use and Comment," American Society of Civil Engineers, May 1988.
16. "ARARs Q's and A's: General Policy, RCRA, CWA, SDWA, Post-ROD Information and Contingent Waivers," OSWER 9234.2-01 FSA, June 1991.
17. "CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.
18. "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (Draft), OSWER Directive No. 9283.1-2.
19. "Guide for Conducting Treatability Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, Pre-publication Version.
20. "Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.
21. "Standard Operating Safety Guides," U.S. EPA, Office of Emergency and Remedial Response, November 1984.
22. "Standards for General Industry," 29 C.F.R. Part 1910, Occupational Health and Safety Administration.
23. "Standards for the Construction Industry," 29 C.F.R. 1926, Occupational Health and Safety Administration.
24. "NIOSH Manual of Analytical Methods," 2d edition. Volumes I - VII, or the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.
25. "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/ Environmental Protection Agency, October 1985.
26. "TLVs - Threshold Limit Values and Biological Exposure Indices for 1987 - 88," American Conference of Governmental Industrial Hygienists.

27. "American National Standards Practices for Respiratory Protection," American National Standards Institute Z88.2-1980, March 11, 1981.
28. "Quality in the Constructed Project - Volume 1," American Society of Civil Engineers, 1990.
29. "Closeout Procedures for National Priorities List Sites," OSWER Directive 9320.2-09A-P, EPA 540-R-98-016, January 2000.
30. "Memorandum, Region 4 Data Management and Electronic Data Deliverables," U.S. EPA, Region 4, Superfund Division, April 23, 2010.
31. Field Branches Quality System and Technical Procedures (<http://www.epa.gov/region4/sesd/fbotp/index.html>)
32. Other guidances referenced in the UAO that are not listed above (i.e., QA, Sample and Data Analysis, etc.).

SUMMARY OF THE MAJOR DELIVERABLES FOR THE
REMEDIAL DESIGN AND REMEDIAL ACTION AT
THE WARD TRANSFORMER SUPERFUND SITE
OPERABLE UNIT NUMBER 1

<u>DELIVERABLE</u>	<u>EPA RESPONSE</u>
<u>TASK I</u> <u>REMEDIAL DESIGN</u>	
Preliminary Design	
Results of Data Acquisition Activities (5)	Review and Approve
Design Criteria Report (5)	Review and Approve
Preliminary Plans and Specifications (5)	Review and Approve
Plan for Satisfying Permitting Requirements (5)	Review and Approve
Prefinal/Final Design	
Complete Design Analyses (5)	Review and Approve
Final Plans and Specifications (5)	Review and Approve
Final Construction Schedule (5)	Review and Approve
Construction Cost Estimate (5)	Review and Comment
Institutional Controls Implementation and Assurance Plan (ICIAP) (5)	Review and Approve
<u>TASK II</u> <u>REMEDIAL ACTION</u>	
RA Work Plan (5)	Review and Approve
Project Delivery Strategy (5)	Review and Approve

Construction Management Plan (5)	Review and Approve
Construction Quality Assurance Plan (5)	Review and Approve
Construction Health and Safety Plan/Contingency Plan (5)	Review and Comment
Prefinal Construction Inspection Report (5)	Review and Approve
Final Construction Report (5)	Review and Approve
Remedial Action Report (5)	Review and Approve

TASK III Monitoring

Performance Standards Verification Plan (5), **to be submitted within the Preliminary Design	Review and Approve
--	--------------------

*NOTE: The number in parenthesis indicates the number of copies to be submitted by the PSDs. One copy shall be unbound, the remainder shall be bound

Ward Superfund OU1 Trust Fund PRP Agreement Signature Tracking		
Party	PRP Signature Received?	
Akers National Roll Company (named as National Roll)	Yes	
BAE Systems Norfolk Ship Repair Inc.	Yes	
Baltimore Gas & Electric Company (BGE)	Yes	
BASF Corporation	Yes	
Bayer CropScience, Inc.	Yes	
Cape Hatteras Electric Membership Corporation	Yes	
Cargill, Incorporated	Yes	
Carr & Duff, Inc., for itself and on behalf of Ed Duff	Yes	
Cemex Construction Materials Florida, LLC	Yes	
Chemical Products Corporation	Yes	
Chevron Mining Inc.	Yes	
Cleveland Electric Company	Yes	
Continental Grain Company	Yes	
Cooper Power Systems, LLC	Yes	
Cooper Tire & Rubber Company	Yes	
Delaware Electric Cooperative, Inc.	Yes	
Donovan Spring and Equipment	Yes	
Dravo Corp.	Yes	
E. I. du Pont de Nemours and Company	Yes	
Endicott Clay Products Company	Yes	
ExxonMobil Oil Corporation	Yes	
Fabri-Kal Corporation	Yes	
FMC Corporation	Yes	
Four County Electric Membership Corporation	Yes	
Frontier Communications Corporation	Yes	
Furman University	Yes	
General Electric (named as RCA, n/k/a General Electric)	Yes	
Georgia-Pacific LLC	Yes	
GrafTech International Holdings Inc., formerly known as UCAR Carbon Company Inc.	Yes	
Grand Haven Board of Light and Power/City of Grand Haven MI	Yes	
Green Circle Growers, Inc.	Yes	
Greenwood Mills, Inc.	Yes	
Guam Power Authority	Yes	
Harsco Corp., f/k/a Multiserve North America f/k/a Heckett	Yes	
Haynes International, Inc.	Yes	
Hercules	Yes	
Honeywell	Yes	
Hudson Light and Power Department	Yes	
Huntington-Ingalls Inc., f/k/a Northrup Grumman Shipbuilding, Inc.	Yes	
Imerys Fused Minerals Greeneville, Inc.	Yes	
International Paper Company	Yes	
Intertape Polymer Group, Inc.	Yes	
Jessop Steel, LLC	Yes	
Lafarge Mid-Atlantic, LLC and/or Lafarge North America, Inc.	Yes	
Louisburg, Town of	Yes	
Martin Marietta Materials, Inc.	Yes	
Mid-Valley Pipeline Company	Yes	
Mittal Steel USA-Lancashire Coal Inc. (Jackson County Iron Company)	Yes	
Monroe, City of	Yes	
National Lime and Stone Company, The	Yes	
National Railroad Passenger Corporation ("Amtrak")	Yes	
North Carolina State University	Yes	
New Hampshire Insurance Company	Yes	
Norfolk Southern Railway Company	Yes	
North Carolina Department of Agriculture and Consumer Services a/k/a North Carolina State Fair	Yes	
North Carolina Department of Health and Human Services	Yes	
The North Carolina Granite Corporation	Yes	
North Georgia Electric Membership Corporation	Yes	
Novartis Corporation	Yes	
Nucor Corporation	Yes	
Orbital ATK, Inc. f/k/a Alliant Techsystems, Inc. (ATK Launch Systems Inc.)	Yes	
Owen Electric Steel Company of South Carolina	Yes	
Palmetto Electric Cooperative, Inc.	Yes	
Philadelphia, City of	Yes	
Radford, City of, a/k/a Radford, City of, Electric Department	Yes	
Residual Enterprises Corporation, f/d/b/a CSX Residual Company	Yes	

Ward Superfund OU1 Trust Fund PRP Agreement Signature Tracking		
Party	PRP Signature Received?	
Roanoke Electric Steel Corporation	Yes	
Rutherford Electric Membership Corporation	Yes	
Seabrook Enterprises, Inc.	Yes	
Shieldalloy Metallurgical Corporation	Yes	
Southern Maryland Electric Cooperative, Inc.	Yes	
Tarboro, Town of	Yes	
Trap Rock Industries, Inc.	Yes	
Trinity Industries, Inc.	Yes	
United States Pipe and Foundry Company, LLC	Yes	
The University of North Carolina at Chapel Hill (UNC)	Yes	
Union Carbide Corporation	Yes	
Veolia Environmental Services Waste-to-Energy f/k/a Montenay Power Co.	Yes	
Vulcan Construction Materials, LLC	Yes	
Weyerhaeuser Company	Yes	
Winston-Salem, City of	Yes	
Basset Furniture Industries, Inc.	Yes	
Consolidation Coal Company	Yes	
Dover, City of Delaware	Yes	
Environmental Protection Services, Inc.	Yes	
Erachem Comilog, Inc.	Yes	
PCS Phosphate Company, Inc.	Yes	

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Akers National Roll Company

[Print Name of Party]



Dated

Name (print): Rose Hoover

Title: Vice President

DESIGNATED REPRESENTATIVE

Name: Joshua D. Baker, Esq.

Title: Counsel

Mailing Address: Metz Lewis Brodman Must O'Keefe

535 Smithfield Street, Suite 800

Pittsburgh, PA 15222

Phone Number: (412) 918-1100

Email: jbaker@metzlewis.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

BAE Systems Norfolk Ship Repair Inc.
[Print Name of Party]

August 3, 2016
Dated:

Anne M. Donohue
Name (print): Anne M. Donohue
Title: Deputy Chief Counsel

DESIGNATED REPRESENTATIVE

Name: Anne M. Donohue

Title: Deputy Chief Counsel

Mailing Address: 750 West Berkley Avenue
Norfolk, VA 23523

Phone Number: (757) 494-4916

Email: anne.donohue@baesystems.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

BGE
[Print Name of Party]

8/15/16
Dated

Carol Dodson
Name (print): Carol Dodson
Title: Vice President - Support Services

DESIGNATED REPRESENTATIVE

Name: Corporate Creations Network

Title: _____

Mailing Address: 2 Wisconsin Circle, Suite 700

Chevy Chase MD 20815

Phone Number: _____

Email: _____

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

BASF Corporation



Name: Linda Mirsky Brenneman

Title: Associate General Counsel, Environment

DESIGNATED REPRESENTATIVE

Name: Karyllen Dodson Mack

Title: Environmental Counsel

Mailing Address: BASF Corp.

100 Park Ave.

Florham Park, NJ 07932

Phone Number: 973-245-7170

Email: Karyllen.mack@basf.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Bayer CropScience Inc
(Stauffer Management Company LLC as litigation
agent for Bayer CropScience Inc)

[Print Name of Party]

8/4/16

Dated



Name (print): Joe P. Yeager, Esq (McCarter & English LLP)

Title: Assistant Outside General Counsel for Stauffer
Management Company LLC

DESIGNATED REPRESENTATIVE

Name: Charles N. Elmendorf

Title: Senior Director Environmental Remediation

Mailing Address: 1800 Concord Pike
Wilmington, DE 19850

Phone Number: (302) 885-7048

Email: charles.elmendorf@astrazeneca.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Cape Hatteras Electric Membership Corporation
[Print Name of Party]

8/12/16

Dated

Susan E. Flythe

Name (print): Susan E. Flythe

Title: EVP + General Manager

DESIGNATED REPRESENTATIVE

Name: Patrick A. Genzler

Title: Legal Counsel

Mailing Address: Vandeventer Black LLP

500 World Trade Center

Norfolk, VA 23510

Phone Number: 757-446-8631

Email: pgenzler@vanblk.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Cargill, Inc.

[Print Name of Party]

August 2, 2016

Dated

Anne Monine

Name (print): Anne Monine

Title: Corporate Environmental Lead

DESIGNATED REPRESENTATIVE

Name: Anne Monine

Title: Corporate Environmental Lead

Mailing Address: _____

15407 McGinty Rd W.

MS-56-1-938

Wazata, MN 55391

Phone Number: 952-742-2969

Email: anne_monine@cargill.com

Signature Page for the OUI PRP Agreement

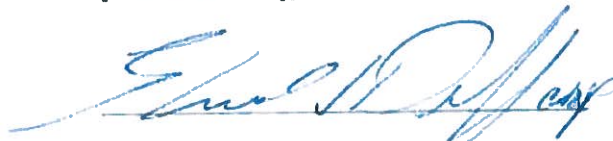
IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

8/17/16

Dated

Carr & Duff, Inc.

[Print Name of Party]



Name (print): Edward J. Duff

Title: Vice President

DESIGNATED REPRESENTATIVE

Name: Edward J. Duff

Title: Vice President

Mailing Address: 2100 Byberry Road

Huntingdon Valley, PA 19006

Phone Number: 215-672-4200

Email: eduff@carrduff.com

and

Mason Avrigian, Jr., Esquire
Jeffrey P. Wallack, Esquire
Attorneys for Carr & Duff, Inc.
Wisler Pearlstine, LLP
460 Norristown Road, Suite 110
Blue Bell, PA 19422
(610) 825-8400
mavrigian@wispearl.com
jwallack@wispearl.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

CEMEX Construction Materials Florida, LLC



Name: Mike F. Egan
Title: EVP & GC

DESIGNATED REPRESENTATIVE

Name: Mike F. Egan

Title: EVP & General Counsel

Mailing Address: 1501 Belvedere Road

West Palm Beach, FL 33406

Phone Number: 561-651-7130

Email: michaelf.egan@cemex.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]

Chemical Products Corporation

Name: Lloyd Ballard Mauldin

Title: President

DESIGNATED REPRESENTATIVE

Name: Lloyd Ballard Mauldin

Title: President

Mailing Address: P.O. Box 2470
Cartersville, GA 30120

Phone Number: (770) 382-2144

Email: BMauldin@cpc-us.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Chevron Mining Inc.
[Print Name of Party]

8/2/16

Dated

Robert R. John

Name (print): Robert R. John

Title: President

DESIGNATED REPRESENTATIVE

Name: Julie Lee

Title: Project Manager

Mailing Address: Chevron Environmental Management

6001 Bollinger Canyon Road

San Ramon, CA 94583-2324

Phone Number: 925-842-0198

Email: Julie.Lee@chevron.com

Note: As per Paragraph 7 of the Ward Transformer
Superfund Site PRP Agreement, Chevron Mining,
Inc. elects to be a "Cashout Party" and pay its
designated amount contained in Exhibit B of
this Agreement (\$66,000).

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

August 8, 2016

Dated

Cleveland Electric Company

[Print Name of Party]



Name (print): Ken Harbour

Title: Vice President

DESIGNATED REPRESENTATIVE

Name: Herman L. Fussell

Title: Attorney

Mailing Address: Hudson Parrott Walker

3575 Piedmont Rd., NE, Ste. L100

Atlanta, Georgia 30305

Phone Number: 404.781.0565

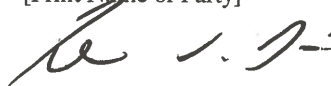
Email: hfussell@hpwlegal.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Continental Grain Company

[Print Name of Party]



August 10, 2016

Dated

Name (print): Frank W. Baier

Title: Executive Vice President -
Chief Financial Officer

DESIGNATED REPRESENTATIVE

Name: Michael R. Mayberry

Title: Senior Vice President - Legal

Mailing Address: Continental Grain Co.

767 Fifth Avenue, 15th Fl.

New York NY 10153

Phone Number: 212-207-2898

Email: michael.mayberry@conti.com

Signature Page for the OUI PRP Agreement

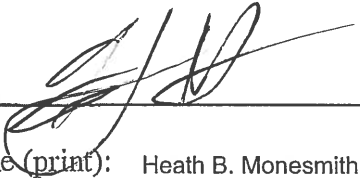
IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

9/7/16

Dated

Cooper Power Systems, LLC

[Print Name of Party]



Name (print): Heath B. Monesmith

Title: Senior Vice President and
Deputy General Counsel

DESIGNATED REPRESENTATIVE

Name: William V. Shaklee

Title: Senior Attorney

Mailing Address: Eaton

1000 Eaton Boulevard

Cleveland, OH 44122

Phone Number: 440-523-4785

Email: WilliamShaklee@eaton.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

COOPER TIRE & RUBBER COMPANY



Name: Thomas N. Lause

Title: VP & Treasurer

Approved as to Legal
Form JSW

DESIGNATED REPRESENTATIVE

Name: General Counsel

Title:

Mailing Address:

701 Lima Avenue

Findlay, Ohio 45840

Phone Number: 419-423-1321

Email: cooper_legal@coopertire.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

DELAWARE ELECTRIC COOPERATIVE, INC.
[Print Name of Party]

8/8/2016

Dated

J. William Andrew

Name (print): J. WILLIAM ANDREW

Title: PRESIDENT & CEO

DESIGNATED REPRESENTATIVE

Name: BRUCE CAMPBELL

Title: MANAGER OF COLLECTIONS

Mailing Address: _____

PO BOX 600 / 14198 SUSSEX HWY
GREENWOOD, DE 19950

Phone Number: 302-349-3159

Email: BCAMPBELL@DECOOP.COM

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]

Donovan Spring & Equipment Co. Inc.



Name: **JOHN CHAKMAKAS**

Title: **VP + TREAS**

DESIGNATED REPRESENTATIVE

Name: Michael J. Quinn

Title: Attorney

Mailing Address: McLane Middleton

100 Arboretum Drive

Newington, NH 03801

Phone Number: 603-436-2818

Email: mike.quinn@mcclane.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Dravo Corp.
[Print Name of Party]

August 11, 2016

Dated

K. A. S. O.

Name (print): Kevin Whyte

Title: Vice President and General Counsel

DESIGNATED REPRESENTATIVE

Name: Joseph Freudenberg

Title: Environmental Counsel

Mailing Address: Carmeuse Lime & Stone

11 Stanwix St., 21st floor

Pittsburgh PA 15222

Phone Number: 412 995 1054

Email: joseph.freudenberg@carmeusa.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

E. I. du Pont de Nemours and Company
[Print Name of Party]

Aug 9, 2016

Dated

Michael J. Lucas
Name (print): Michael J. Lucas
Title: REMEDIATION TEAM MANAGER

DESIGNATED REPRESENTATIVE

Name: PATRICIA MCGEE, Esq.

Title: CORPORATE COUNSEL

Mailing Address: 977 CENTRE ROAD
WILMINGTON DE 19805

Phone Number: 302-996-8275

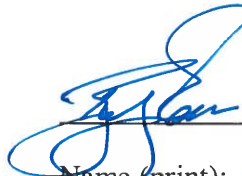
Email: PATRICIA.MCGEE@DUPONT.COM

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Endicott Clay Products Company
[Print Name of Party]

August 15, 2016
Dated


Name (print): Ryan L. Parker
Title: President & CEO

DESIGNATED REPRESENTATIVE

Name: Ryan L. Parker
Title: President & CEO

Mailing Address: P.O. Box 17
Fairbury, NE 68352

Phone Number: 402-729-3315
Email: rparker@endicott.com

Electing to be a Cashout Party. ^{R&P 8/15/16}

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

16 Aug 16

Dated

EXXONMOBIL OIL CORPORATION

[Print Name of Party]



Name (print): ROBERT W. JACKMORE

Title: US/AMERICAS South
Commercial Manager

DESIGNATED REPRESENTATIVE

Name: STEVEN P. ANASTOS

Title: Project Manager

Mailing Address: EXXONMOBIL
22777 SPRINGWOODS VILLAGE PARKWAY
52.28.282, SPRING, TX 77389

Phone Number: 832-625-7625

Email: STEVEN.P.ANASTOS @
exxonmobil.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

Fabri-Kal Corporation

Gary C Galia

Name: Gary C. Galia

Title: EVP – Finance/CFO

DESIGNATED REPRESENTATIVE

Name: _____

Title: _____

Mailing Address: _____

Phone Number: 269-385-5050

Email: ggalia@fabri-kal.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

8/3/16

Dated

FMC Corporation
[Print Name of Party]

Christina Kaba

Name (print): Christina Kaba

Title: Director, EHS Remediation
& Governance

DESIGNATED REPRESENTATIVE

Name: John F. Stillman

Title: Assistant General Counsel

Mailing Address: FMC Corporation

2929 Walnut St.

Philadelphia, PA 19104

Phone Number: (215) 299-6989

Email: John.Stillman@fmc.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Four County Electric Membership Corporation

August 3, 2016

Dated:



Name: Mitchell L. Keel

Title: CEO

DESIGNATED REPRESENTATIVE

Name: Mitchell L. Keel

Title: CEO

Mailing Address: _____

1822 NC Hwy 53 W

Burgaw, NC 28425

Phone Number: 910-259-1825

Email: mkeel@fourcty.org

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Frontier Communications Corp.

[Print Name of Party]

7/26/16

Dated

Mark D. Nielsen

Name (print): Mark D. Nielsen

Title: EVP, General Counsel

DESIGNATED REPRESENTATIVE

Name: John S. Hahn

Title: Partner

Mailing Address: Mayer Brown LLP

1999 K Street N.W.

Washington D.C. 20006-1101

Phone Number: 202-263-3346

Email: jhahn@mayerbrown.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]

Furman University

Name:

Title:

DESIGNATED REPRESENTATIVE

Name: Angela Littlejohn

Title: General Counsel

Mailing Address: 3300 Pinson HWY
Greenville, SC 29631

Phone Number: 864-294-2171

Email: Angela.Littlejohn@
Furman.edu

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

General Electric Co.

[Print Name of Party]

5 Aug 2016

Dated



Name (print): Randall McAlister

Title: Exec. Mgr.
Environmental Remediation

DESIGNATED REPRESENTATIVE

Name: Kirk MacFarlane

Title: Executive Counsel

Mailing Address: General Electric Company
640 Freedom Business Center
King of Prussia, PA 19406

Phone Number: 610 992 7976

Email: kirk.mcfarlane@ge.com

Signature Page for the OU1 PRP Agreement

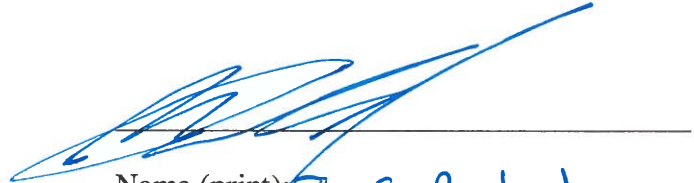
IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Georgia-Pacific LLC

[Print Name of Party]

8/1/16

Dated



Name (print): The G. Parland

Title: Senior Vice President -
General Counsel and Secretary

DESIGNATED REPRESENTATIVE

Name: John Bottini

Title: Senior Counsel

Mailing Address: Georgia-Pacific LLC

133 Peachtree St N.E.

Atlanta, Georgia 30303

Phone Number: 404-652-4883

Email: john.bottini@gapac.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Non-Performing Settling
Defendant (non-cash out)

GrafTech International Holdings Inc.
f/k/a UCAR Carbon Company Inc.



Name: LIONEL D BATTY

Title: PRESIDENT, ENGINEERING SOLUTIONS
GRAFTech INTERNATIONAL

Date:

DESIGNATED REPRESENTATIVE

Name: Cynthia A. Binns

Title: Deputy General Counsel

Mailing Address: Graftech International

Holdings Inc., 6100 Oak Tree Blvd.,

Suite 300 - Park Center I, Independence,

OH 44131

Phone Number: 216-676-2288

Email: cynthia.binns@graftech.com

With a copy to:

Jean H. McCreary

Partner

Nixon Peabody LLP

1300 Clinton Square

Rochester, NY 14604-1792

Phone Number: 585-263-1611

Email: jmccreary@nixonpeabody.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

August 8, 2016

Dated

Grand Haven Board of Light and Power

[Print Name of Party]



Name (print): David R. Walters

Title: General Manager

DESIGNATED REPRESENTATIVE

Name: Timothy J. Lundgren

Title: Partner

Mailing Address: Varnum, LLP

333 Bridge Street NW

Grand Rapids, MI 49504

Phone Number: (616) 336-6750

Email: tjlundgren@varnumlaw.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

GREEN CIRCLE GROWERS, INC
[Print Name of Party]

8-8-16

Dated

Tony Lucarell

Name (print): TONY LUCARELL

Title: CFO

DESIGNATED REPRESENTATIVE

Name: Amanda M. Knapp

Title: Attorney

Mailing Address: Roetzel & Andress, LPA

1375 East Ninth Street

One Cleveland Center, 10th FL, Cleveland, OH 44114

Phone Number: (216) 623-0150

Email: aknapp@ralaw.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]

Greenwood Mills Inc
Name: William B. Watkins
Title: William B. WATKINS
Title: Vice President

DESIGNATED REPRESENTATIVE


Name: William B. Watkins
Title: Vice President
Mailing Address: P.O. Box 1546
Greenwood SC 29648

Phone Number: 864-941-4074
Email: W.Watkins@GreenwoodCE.
com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

8/1/16
Dated

GUAM POWER AUTHORITY

Name (print): JOHN M. BENAVENTE
Title: ^{FOR} GENERAL MANAGER

DESIGNATED REPRESENTATIVE
Name: JOHN M. BENAVENTE
Title: GENERAL MANAGER
Mailing Address: P.O. Box 2977
Hagatna, Guam 96929
Phone Number: (671) 648-3180
Email: jbenavente@gpagwa.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Harsco Corporation
[Print Name of Party]

8/16/16

Dated

Sam Roman

Name (print): Samuel Romaninsky

Title: Assistant General Counsel,
Global Litigation and Dispute
Resolution
DESIGNATED REPRESENTATIVE

Name: Samuel

Title: AGC, Global Litigation & Dispute
Resolution

Mailing Address: Harsco Corporation
350 Poplar Church Road
Camp Hill, PA 17011

Phone Number: 717-730-1950

Email: sromaninsky@harsco.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

July 27, 2016

Dated

Hyman International, Inc.
[Print Name of Party]

[Signature]

Name (print): Janice Gunst

Title: VP- General Counsel

DESIGNATED REPRESENTATIVE

Name: Janice Gunst

Title: VP- General Counsel

Mailing Address: 1000 W. Park Ave.
Kokomo, IN 46904

Phone Number: 765-456-6110

Email: jgunst@hymanintl.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME] Hercules Incorporated



Name: Robin E. Lampkin

Title: Senior Environmental, Product
Regulatory & Trade Group Counsel

DESIGNATED REPRESENTATIVE

Name: Robin E. Lampkin

Title: Senior Environmental, Product Regulatory
& Trade Group Counsel

Mailing Address: 5200 Blazer Parkway,

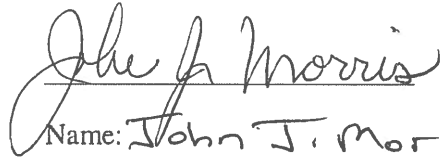
Durham, NC 27617

Phone Number: 614.790.3019

Email: relampkin@ashland.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME] *Honeywell*



Name: *John J. Morris*

Title: *Global Remediation Director*

DESIGNATED REPRESENTATIVE

Name: _____

Title: _____

Mailing Address: _____

Phone Number: _____

Email: _____

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]

HUDSON LIGHT & POWER DEPT.

Brian R Choquette 8/10/16

Name: BRIAN R. CHOQUETTE

Title: GENERAL MANAGER

DESIGNATED REPRESENTATIVE

Name: Brian R. Choquette

Title: General Manager

Mailing Address: _____

Hudson Light & Power Department

49 Forest Avenue, Hudson, MA 01749

Phone Number: 978-568-8736

Email: bchoquette@hudsonlight.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Huntington Ingalls Incorp.
[Print Name of Party]

01/17/2016

Dated

Thomas C Stiehle

Name (print):

Thomas Stiehle

Title:

**VP Business Management
& CFO**

DESIGNATED REPRESENTATIVE

Name: Doug Arnold

Title: Partner

Mailing Address: Alston + Bird LLP

1201 West Peachtree St.

Atlanta, GA 30309

Phone Number: (404) 881-7000

Email: doug.arnold@alston.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Imerys fused Minerals Greeneville, Inc.
[Print Name of Party]

7/28/16

Dated

[Signature]

Name (print): Tim Newton

Title: C.O.O.

DESIGNATED REPRESENTATIVE

Name: _____

Title: _____

Mailing Address: _____

Phone Number: _____

Email: _____

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME] International Paper

Brian E. Heim

Name: Brian E. Heim

Title: Chief Counsel

DESIGNATED REPRESENTATIVE

Name: Brian Heim

Title: Chief Counsel

Mailing Address: 6400 Poplar Ave
Memphis, TN 38197

Phone Number: 901-419-3824

Email: brian.heim@ipaper.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME] Intertape Polymer Group Inc.



Name: Shawn Nelson

Title: Senior VP, Sales

DESIGNATED REPRESENTATIVE

Name: Randi M. Booth

Title: Vice President & General Counsel

Mailing Address: 100 Paramount Dr.

Suite 300

Sarasota FL 34232

Phone Number: 941.739.7521

Email: rbooth@itape.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Jessop Steel, LLC

[Print Name of Party]

8/5/2016

Dated

Elliot S. Davis

Name (print): Elliot S. Davis

Title: Sr. Vice President

DESIGNATED REPRESENTATIVE

Name: Matthew J. Engott

Title: Assistant General Counsel

Mailing Address: 1000 Sixth PPG


Place, Pittsburgh, PA

15222

Phone Number: 412-394-2910

Email: Matt.engott@atimetals.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME] Latare Mid-Atlantic LLC


Name: William B. Miller

Title: Vice President

DESIGNATED REPRESENTATIVE

Name: William B. Miller

Title: Vice President

Mailing Address: Latare Mid-Atlantic LLC
6401 Golden Triangle Dr., Suite 400
Greenbelt, MD 20770

Phone Number: (301) 982-1497

Email: bill.miller@latarecholcim.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

Town of Louisburg

Karl T. Pernell

Name: Karl T. Pernell

Title: Mayor

DESIGNATED REPRESENTATIVE

Name: Jonathan Franklin

Title: Town Administrator

Mailing Address: 110 W. Nash Street

Louisburg, NC 27549

Phone Number: 919-497-1004

Email: jfranklin@nc.rr.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Martin Marietta Materials, Inc.
[Print Name of Party]

8-15-16
Dated

Roselyn Bar
Name

(print): Title: EVP, General Counsel
& Corporate Secretary

DESIGNATED REPRESENTATIVE

Name: Roselyn Bar

Title: EVP, G.C. & Secretary

Mailing Address:

2710 Wycliff Road

Raleigh, NC 27607

Phone Number: 919-781-4550

Email: Roselyn.Bar@MartinMarietta.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

8/12/16

Dated

Mid-Valley Pipeline Company
[Print Name of Party]



Name (print): D. R. Chalson

Title: Vice President

DESIGNATED REPRESENTATIVE

Name: Kevin Dunleavy

Title: Chief Counsel

Mailing Address: 3801 West

Chester Pike, Newtown

Square, PA 19073

Phone Number: 215-977-6273

Email: Kevin.dunleavy@sunoco.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Jackson County Iron Company
K/na Mittal Steel USA-Lancashire Coal Inc
[Print Name of Party]

8-15-16

Dated

Marc Jeske
Name (print): Marc Jeske
Title: Corp. Sec.

DESIGNATED REPRESENTATIVE

Name: Lisa Zeboritz

Title: Attorney

Mailing Address: Neal, Gerber & Eisenberg LLP

2 North LaSalle Street

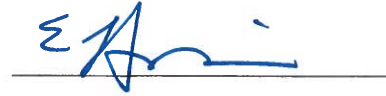
Chicago IL 60602-3801

Phone Number: 312-269-8033

Email: lzeboritz@ngelaw.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

CITY OF MONROE



Name: E.L. Faison

Title: City Manager

DESIGNATED REPRESENTATIVE

Name: E.L. Faison

Title: City Manager

Mailing Address: Post Office Box 69

Monroe, North Carolina 28111

Phone Number: (704) 282-4500

Email: lfaison@monroenc.org

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed
as of the day and year first written above.

NATIONAL LIME AND STONE COMPANY


Name: R. Daniel Mapes

Title: Director of Administrative Services

DESIGNATED REPRESENTATIVE

Name: Thomas W. Palmer, Esq.

Title: Corporate Counsel

Mailing Address:

Four SeaGate, 8th Floor
Toledo, OH 43604

Phone Number: (419) 249-7100

Email: palmer@marshall-melhorn.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]
National Railroad Passenger Corporation



Name: William Herrmann

Title: VP & Managing Deputy General Counsel

DESIGNATED REPRESENTATIVE

Name: David Restaino

Title: Partner, Fox Rothschild LLP

Mailing Address: 997 Lenox Dr., Bldg. 3

Princeton Pike Corporation Center

Lawrenceville, NJ 08648-2311

Phone Number: (609) 895-6701

Email: DRestaino@foxrothschild.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

NORTH CAROLINA STATE UNIVERSITY

8-16-2016
Dated

Scott R. Douglass
Name: Scott R. Douglass
Title: Vice Chancellor for Finance and
Administration

DESIGNATED REPRESENTATIVE

Name: Brenton W. McConkey
Title: Assistant General Counsel
Mailing Address: Campus Box 7008
304D Holladay Hall
Raleigh, NC 27695-7008
Phone: 919-760-3599
Email: brent_mcconkey@ncsu.edu

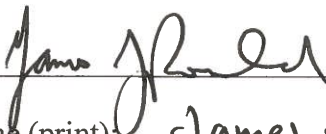
Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

NEW HAMPSHIRE INSURANCE COMPANY

7/27/16


Dated


Name (print): James J. Rowland

Title: VP + Asst. Comptroller.

7/28/16

Dated


Name (print): Martin Bogue

Title: Assistant Secretary

DESIGNATED REPRESENTATIVE

Name: DEVALEENA DAS
Title: ASSOCIATE GENERAL COUNSEL
Mailing Address: 175 WATER STREET,
15TH FLOOR
NEW YORK, NY 10038
Phone Number: (212) 458-7465
Email: devaleena.das@aig.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Norfolk Southern Railway Company

8/15 /10

Dated

[Signature]

Name (print): Helen M. Hart

Title: General Solicitor

DESIGNATED REPRESENTATIVE

Name: Helen M. Hart

Title: General Solicitor

Mailing Address: Norfolk Southern Corp.

3 Commercial Pl.

Norfolk, VA 23510

Phone Number: 757-629-2752

Email: helen.hart@nscorp.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]
NC Department of Agriculture & Consumer Services
a/k/a NC State Fair
N. David Smith

Name: N. David Smith
Title: Chief Deputy Commissioner

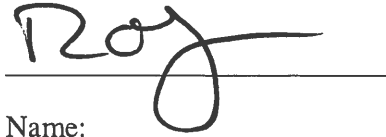
DESIGNATED REPRESENTATIVE

Name: N. David Smith
Title: Chief Deputy Commissioner
Mailing Address: 1001 Mail Service Center
Raleigh, NC 27699-1001

Phone Number: 919-707-3033
Email: david.smith@ncagr.gov

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]



Name:

Title: Secretary NCDHHS

DESIGNATED REPRESENTATIVE

Name: Lisa G. Corbett

Title: Deputy General Counsel

Mailing Address: #2001 Mail Serv. Ctr
Raleigh, NC 27699-2001

Phone Number: 919-855-4800

Email: lisa.corbett@dohhs.nc.gov

Signature Page for the OUI PRP Agreement

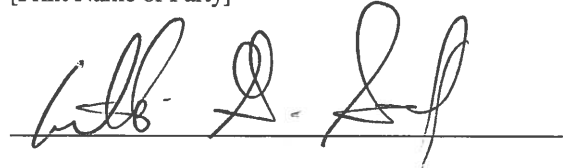
IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

August 16, 2016

Dated

The North Carolina Granite Corporation

[Print Name of Party]



Name (print):

William G Swift

Title:

President & CEO

DESIGNATED REPRESENTATIVE

Name: Denis E. Jacobson

Title: Attorney at Law

Mailing Address: c/o Tuggle Duggins P.A.

P.O. Box 2888

Greensboro, NC 27402

Phone Number: 336-378-1431

Email: djacobson@tuggleduggins.com


Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

8/1/16

Dated

North Georgia Electric Membership Corporation
[Print Name of Party]



Name (print): KATHRYN D. WEST

Title: President/CEO

DESIGNATED REPRESENTATIVE

Name: Henry C. Tharpe, Jr.

Title: Outside General Counsel

Mailing Address: 225 W. King Street,

P.O. Box 398

Dalton, Georgia 30722-0398

Phone Number: 706-278-5211

Email: htharpe@daltongalaw.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

~~[PARTY NAME]~~ **NOVARTIS CORPORATION**



Name: **BARRY ROSENFELD**

Title: **SECRETARY**

DESIGNATED REPRESENTATIVE

Name: Keith P. McManus, Esq.

Title: Attorney for Novartis Corporation

Mailing Address: Bressler, Amery & Ross, P.C.

325 Columbia Turnpike, Suite 301

Florham Park, New Jersey 07932

Phone Number: 973-514-1200

Email: kmcmamus@bressler.com

Signature Page for the OU1 PRP Agreement

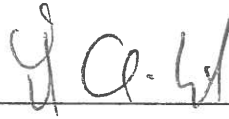
IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

August 1, 2016

Dated

Nucor Corporation

[Print Name of Party]



Name (print): Tomas A. Miller

Title: Vice President and General Manager
of Environmental Affairs

DESIGNATED REPRESENTATIVE

Name: Nucor Corporation

Title: Office of General Counsel

Mailing Address: 1915 Rexford Rd

Charlotte, NC 28211

Phone Number: (704) 366-7000

Email: Greg.Murphy@nucor.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Orbital ATK, Inc.
[Print Name of Party]

18 Aug 2016

Dated

Elizabeth A. Humphrey

Name (print): Elizabeth Ann Humphrey
Title: Sr. Director Finance & HR for
Patrick Nolan, VP/GM MPD

DESIGNATED REPRESENTATIVE

Name: Kristin L. Boetticher
Title: VP & Assistant General Counsel

Mailing Address: Orbital ATK, Inc.
4700 Nathan Lane N.
Plymouth, MN 55442

Phone Number: (763) 744-5030

Email: Kristin.boetticher@orbitalatk.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Owen Electric Steel Company
of South Carolina
[Print Name of Party]

8/15/16

Dated



Name (print): Paul Kirkpatrick

Title: Secretary

DESIGNATED REPRESENTATIVE

Name: Paul Kirkpatrick

Title: Secretary

Mailing Address: 6565 N. MacArthur Blvd.
Suite 800

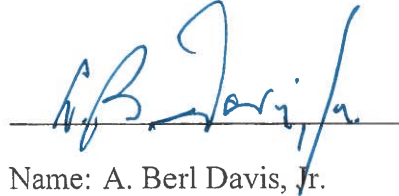
Irving, TX 75039

Phone Number: (972) 409-4724

Email: paul.kirkpatrick@cmc.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Palmetto Electric Cooperative, Inc.



Name: A. Berl Davis, Jr.

Title: President and CEO

DESIGNATED REPRESENTATIVE

Name: A. Berl Davis, Jr.

Title: President and CEO

Mailing Address: 1 Cooperative Way

Hardeeville, SC 29927

Phone Number: 843-208-5500

Email: bdavis@palmetto.coop

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

8/18/2016
Dated

CITY OF PHILADELPHIA

Patrick K. O'Neill
Patrick K. O'Neill, Esq.
Divisional Deputy City Solicitor

DESIGNATED REPRESENTATIVE

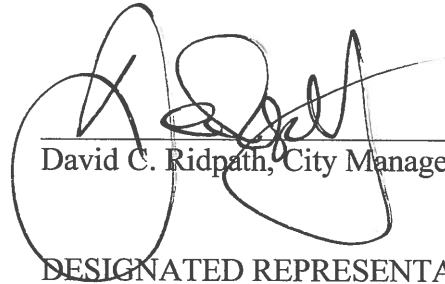
Name: Patrick K. O'Neill, Esq.
Title: Divisional Deputy City Solicitor
Mailing Address: City of Philadelphia
Law Department
1515 Arch Street, 16th Fl.
Philadelphia, PA 19102
Phone Number: 215-683-5172
E-mail: patrick.oneill@phila.gov

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

August 15, 2016

City of Radford, Virginia



David C. Ridpath, City Manager
DESIGNATED REPRESENTATIVE

Name:	Gail Cook DeVilbiss
Title:	Radford City Attorney
Mailing Address:	P O Box 3562 Radford, Virginia 24143
Phone Number:	(540) 639-4056
Email:	<u>gcdlaw@verizon.net</u>

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Residual Enterprises Corporation

[Print Name of Party]

July 26, 2016

Dated

Nathan D. Goldman

Name (print): **Nathan D. Goldman**

Title: **Vice President**

DESIGNATED REPRESENTATIVE

Name: JEFFREY W. STYRON

Title: SEPLA COUNSEL - ENVIRONMENTAL

Mailing Address: 500 WATER ST., J150
JACKSONVILLE, FL 32202

Phone Number: (904) 366-4058

Email: JEFF-STYRON@CSX.COM

Signature Page for OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Roanoke Electric Steel Corporation

8/8/16
Dated

T. Joe Crawford

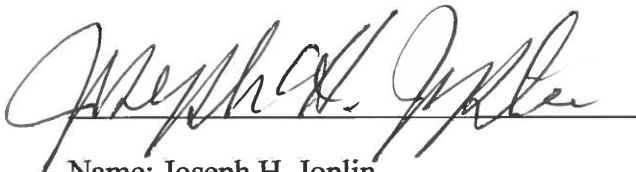
Name (print): T. Joe Crawford
Title: Vice President and General Manager

DESIGNATED REPRESENTATIVE

Name (print): David R. Steiner
Title: Attorney for Roanoke Electric Steel
Corporation
Address: Barrett McNagny LLP
215 East Berry Street
Fort Wayne, IN 46802
Phone: (260) 423-8915
email: drs@barrettlaw.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

RUTHERFORD ELECTRIC MEMBERSHIP
CORPORATION

A handwritten signature in black ink, appearing to read "Joseph H. Joplin", is written over a horizontal line.

Name: Joseph H. Joplin

Title: General Manager

DESIGNATED REPRESENTATIVE

Name: Joseph H. Joplin

Title: General Manager

Mailing Address: P.O. Box 1569

Forest City, NC 28043

Phone Number: 828-245-1621

Email: jjoplin@remc.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

SEABROOK ENTERPRISES, INC.

8-11-14

Dated



Name: Gregory Estep
Title: President and Board Member
DESIGNATED REPRESENTATIVE:



Name: Carl Askey
Title: Vice-President – Finance/Olam Edible
Nuts
Mailing Address: 2077 Convention Center
Concourse, Suite 150
College Park, GA 30337
Phone Number: [404-209-2626](tel:404-209-2626)
Email: carl.askey@olamnet.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

8/19/2016

Dated

Shield Alloy Metallurgical Corp.
[Print Name of Party]

Dennis R. Shea
Name (print): Dennis R. Shea

Title: Director

DESIGNATED REPRESENTATIVE

Name: Dennis R. Shea

Title: Director

Mailing Address: 435 Devon Park Drive
Building 200
Wayne, PA 19087

Phone Number: 610-293-5812

Email: dshea@amg-nv.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME]
Southern Maryland Electric Cooperative, Inc.



Name: Austin J. Slater, Jr.

Title: President & C.E.O.

DESIGNATED REPRESENTATIVE

Name: Mark A. MacDougall

Title: Senior Vice President and General Counsel

Mailing Address: Southern Maryland Electric Cooperative

15035 Burnt Store Road, P.O. Box 1937

Hughesville, MD 20637

Phone Number: (301) 274-4307

Email: mark.macdougall@smeco.coop

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

Town of Tarboro

A handwritten signature in black ink, appearing to read "Taro Knight", is written over a horizontal line.

Name: Taro Knight

Title: Mayor Pro-Tempore

DESIGNATED REPRESENTATIVE

Name: Troy R. Lewis

Title: Town Manager

Mailing Address: P.O. Box 220

500 N. Main Street

Tarboro, NC 27886

Phone Number: 252-641-4250

Email: troylewis@tarboro-nc.com

Signature Page for the OU1 PRP Agreement

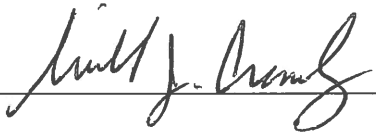
IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Trap Rock Industries, Inc.

[Print Name of Party]

August 15, 2016

Dated



Name (print): Michael J. Crowley

Title: Vice President

DESIGNATED REPRESENTATIVE

Name: Bonnie A. Barnett

Title: Esquire

Mailing Address: One Logan Sq., Ste. 2000

Phila., PA 19103

Phone Number: 215-988-2916

Email: bonnie.barnett@dbi.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

8-2-16

Dated

Trinity Industries, Inc.
[Print Name of Party]



Name (print): S. Theis Rice

Title: Sr. VP and CLO

DESIGNATED REPRESENTATIVE

Name: _____

Title: _____

Mailing Address: _____

Phone Number: 214-589-8170

Email: theis.rice@trin.net

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

United States Pipe and Foundry Company, LLC
[Print Name of Party]

8/12/16

Dated

Brad Overstreet

Name (print): Brad Overstreet

Title: CFO

DESIGNATED REPRESENTATIVE

Name: Geoff Rathgeber

Title: Associate

Mailing Address: Alston Bird LLP
1201 W. Peachtree St.

Atlanta, Ga 30309

Phone Number: 404. 881. 4974

Email: geoff.rathgeber@alston.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

8/10/16

Dated

The University of North Carolina at Chapel Hill

[Print Name of Party]



A. BRADLEY IVES, ASSOC VICE CHANCELLOR FOR

Name (print): Matthew M. Fajack

Title: Vice Chancellor for Finance and
Administration

DESIGNATED REPRESENTATIVE

Name: David E. Fox

Title: Attorney

Address: Moore & Van Allen PLLC
100 North Tryon Street,
Suite 4700

Charlotte, NC 28202-4003

Phone: (919) 286-8069

Email: davidfox@mvalaw.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

[PARTY NAME] Union Carbide
Corporation

Megan C McWillough

Name: Megan C McWillough

Title: Authorized Representative

DESIGNATED REPRESENTATIVE

Name: Thomas E Gieck

Title: Remediation Leader

Mailing Address: 2754 Compass Dr.
280

Grand Junction, CO 81506

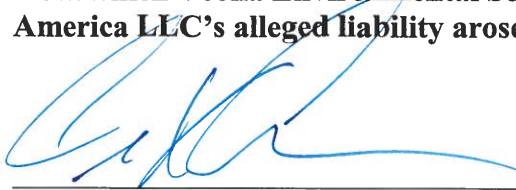
Phone Number: 970-256-8889

Email: gieckte@dow.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

**FOR VEOLIA ENVIRONMENTAL SERVICES NORTH
AMERICA LLC, for itself and on behalf of Veolia ES
Montenay Holdings LLC, but only to the extent that Veolia
ES Montenay Holdings LLC's alleged liability with respect
to the Site arose in connection with the same transaction
from which Veolia Environmental Services North
America LLC's alleged liability arose**



Aug. 8, 2016
Dated

Francis X. Ferrara
Senior Vice President & Deputy General Counsel
Veolia North America
120 Water Street
North Andover, MA 01845

DESIGNATED REPRESENTATIVE

Philip G. Kief
Director, Corporate Counsel, Industrial Business
Veolia North America
4760 World Houston Parkway, Suite 100,
Houston, TX 77032
832-300-5748
Philip.kief@veolia.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Vulcan Construction Materials LLC
[Print Name of Party]

8/9/16

Dated

Jerry F. Perkins, Jr.
Name (print): Jerry F. Perkins, Jr.
Title: MANAGER, & SECRETARY

DESIGNATED REPRESENTATIVE

Name: JOAN A. Floyd
Title: SENIOR ATTORNEY
Mailing Address: 1200 Urban Center Drive
Birmingham, AL 35242
Phone Number: 205 298 3745
Email: Floydj@vncmail.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Weyerhaeuser Company

[Print Name of Party]

August 1, 2016

Dated

Carol Wiseman

Name (print):

Title: Remediation Project Manager

DESIGNATED REPRESENTATIVE

Name: Carol Wiseman

Title: Remediation Project Manager

Mailing Address: _____

5302 NE 146 St, Vancouver, WA 98686

Phone Number: 360-562-7733

Email: carol.wiseman@weyerhaeuser.com

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

[PARTY NAME] City of Winston-Salem



Name: Lee Garrity

Title: City Manager

DESIGNATED REPRESENTATIVE

Name: Lee Garrity

Title: City Manager

Mailing Address: _____

P.O. Box 2511

Winston-Salem, NC 27102

Phone Number: 336-734-1301

Email: leeg@cityofws.org

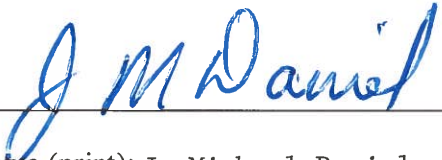
Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Bassett Furniture Industries, Inc.
[Print Name of Party]

8/19/16

Dated


Name (print): J. Michael Daniel

Title: Senior Vice President &
Chief Financial Officer

DESIGNATED REPRESENTATIVE

Name: Todd S. Roessler

Title: Attorney

Mailing Address: 4208 Six Forks Rd, Ste 1400

Raleigh, NC 27609

Phone Number: 919-420-1726

Email: troessler@kilpatricktownsend.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

Consolidation Coal Company
[Print Name of Party]

8/2/16

Dated



Name (print): Jason D. Witt

Title: SECRETARY

DESIGNATED REPRESENTATIVE

Name: Jason D. Witt

Title: Secretary

Mailing Address: 46226 National Rd.

St. Clairsville, Ohio 43950

Phone Number: 740-338-3352

Email: jwitt@coalsource.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

City of Dover

[Print Name of Party]

8/23/2016
Dated

William W. Pepper Sr.

Name William W. Pepper Sr.
(print): Title: Deputy City Solicitor
414 S. State Street
Dover, DE 19901

DESIGNATED REPRESENTATIVE

Name: Nicholas H. Rodriguez, Esq.

Title: City Solicitor

Mailing Address:

414 S. State Street
Dover, DE 19901

Phone Number: (302) 674-0140

Email: nrodriguez@schmittrod.com

Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed effective as of the day and year first written above.

August 19, 2016

Dated

ENVIRONMENTAL PROTECTION SERVICES, INC.

[Print Name of Party]

A handwritten signature in dark ink, appearing to read "Keith R. Reed", is written over a horizontal line.

Name (print): Keith R. Reed

Title: President

DESIGNATED REPRESENTATIVE

Name: Edward L. Kropp

Title: Counsel

Mailing Address: P.O. Box 36425

Indianapolis, IN, 36426

Phone Number: (317) 946-9882

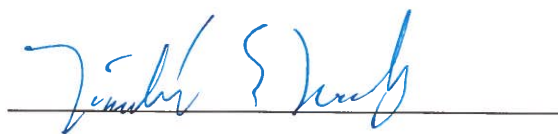
Email: Skipp.kropp@steptoe-johnson.com

Signature Page for the OUI PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

ERACHEM COMILOG INC.

[Print Name of Party]



Name (print): Michael E. Monley

Title: CEO

Dated

DESIGNATED REPRESENTATIVE

Name: John Lazzaretti

Title: Senior Associate

Mailing Address: 4900 Key Tower

127 Public Square

Cleveland, OH 44114

Phone Number: 216.479.8350

Email: john.lazzaretti@squirepb.com

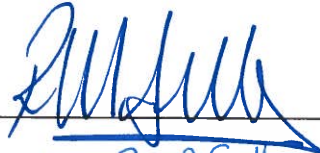
Signature Page for the OU1 PRP Agreement

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be
duly executed effective as of the day and year first written above.

8/15/16

Dated

PCS Phosphate Company, Inc.
[Print Name of Party]



Name (print): Raef Sully

Title: President

DESIGNATED REPRESENTATIVE

Name: Mary Beth Deemer

Title: Partner

Mailing Address: Jones Day

500 Grant St., Suite 4500

Pittsburgh, PA 15219

Phone Number: 412-394-7920

Email: mbdeemer@jonesday.com

UNION COUNTY

THE STATE OF NORTH CAROLINA, EX REL.
N.C. DEPARTMENT OF AGRICULTURE
AND CONSUMER SERVICES,

Plaintiff

V.

WESLEY C. VON EGIDY & VON EGIDY, INC.,

Defendants

SETTLEMENT AGREEMENT

RECITALS

1. On June 6, 2012, the North Carolina Pesticide Board's Secretary served on Wesley C. Von Egidy and Von Egidy, Inc., (hereinafter, collectively, "Defendants") a Notice of Hearing by U.S. Mail, certified, return receipt requested, informing Defendants of the specific charges and allegations against them arising out of violations of provisions of the North Carolina Pesticide Law, G.S. Article 52, and rules adopted pursuant thereto.
2. Defendants received the Notice of Hearing on June 9, 2012.
3. On July 10, 2012, the North Carolina Pesticide Board held a formal hearing to determine whether a civil penalty should be assessed against Defendants and, if so, the nature and/or amount of said penalty. Following the presentation of evidence and the testimony of witnesses the Board deliberated and made findings of fact and conclusions of law, as set forth in its written Order. The Board assessed a civil penalty in the amount of eight thousand dollars (\$8,000.00) against Defendants for four violations alleged in the Notice of Hearing.

5. In its Order the Board determined that:
- a. Defendants committed two violations of N.C. Gen. Stat. § 143-452(a) when Defendants' employees applied pesticides when no one employed or associated with Defendants held a valid pesticide applicator's license.
 - b. Defendants violated N.C. Gen. Stat. § 143-466(e)(1) and (3) by refusing entry or access to an authorized representative of the Board who requested entry for purposes for inspection, and who presented appropriate credentials for purposes of inspecting pesticide storage facilities.
 - c. Defendants violated N.C. Gen. Stat. § 143-443(b)(3) when Defendants' employees applied pesticide in a manner inconsistent with its labeling.
6. The Board assessed a civil penalty in the amount of eight thousand dollars against Defendants for the four violations alleged in the Notice of Hearing.
7. On August 7, 2012, the Board issued its written Order and sent Defendants a copy of the Order, together with a cover letter, via certified mail, return receipt requested.
8. Defendants received the Order on August 13, 2012.
9. Defendants did not file a petition for judicial review with the Superior Court of Wake County or the Superior Court of the county wherein they reside within thirty (30) days following receipt, nor did they pay the civil penalty assessment as provided under G.S. § 150B-45(b).
10. Plaintiff filed suit instituting the above-captioned action and caused service of process to be issued upon Defendants on or about February 28, 2013.
11. Defendants filed their Answer to said action on May 6, 2013.

WHEREAS the parties desire to resolve these matters without further litigation.

1) Defendants shall pay to the Plaintiff the sum of four thousand dollars (\$4,000.00) as follows:

- a. An initial payment of one thousand dollars (\$1,000.00) submitted to the Plaintiff with Defendants' signed original of this Settlement Agreement and the Stipulation of Voluntary Dismissal described below;
- b. Twenty (20) monthly payments of one hundred and fifty dollars (\$150.00) per month, due and payable to the Plaintiff by close of business (5:00 o'clock, p.m.) on the first Monday of each month. The first of the twenty payments shall be made no later than ~~November 4, 2013~~ ^{January 2014}. Monthly payments shall be deemed paid on time if mailed or sent by commercial courier service in an envelope bearing a date and time stamp or post mark no later than 5:00 o'clock p.m. of the date due;

CRB
W.V.

2) The Parties have, contemporaneously with their execution of this Settlement Agreement, signed a Stipulation of Voluntary Dismissal resolving the above-captioned case in the North Carolina District Court, Union County. When Plaintiff has received Defendants' signed original of this Settlement Agreement, Defendant's signed original of the Stipulation of Voluntary Dismissal and Defendants' first payment of one thousand dollars (\$1,000.00), Plaintiff shall file said Stipulation of Voluntary Dismissal with the Clerk of the Superior Court, Union County, North Carolina, dismissing this case.

3) The parties mutually agree to act in good faith in the implementation of this agreement.

4) The parties agree to bear their own attorneys fees and costs. It is understood between

parties hereto regarding the matters set forth, and it supersedes all previous negotiations, discussions and understandings regarding such matters.

- 5) The terms of this Settlement Agreement are contractual and not a mere recital, and may be modified only in a writing executed by all signatories hereto.
- 6) The effective date of this Stipulation of Settlement will be the date on which it has been executed by all parties as shown on the signature lines below.
- 7) North Carolina law shall govern the interpretation and enforcement of this Agreement.

IN TESTIMONY WHEREOF, the parties have set their hands and seals on the dates

indicated below:

PLAINTIFF


James W. Burnette, Jr.

Director, Structural Pest Control and Pesticides Division
North Carolina Department of Agriculture & Consumers Services

Date: 12/18/2013

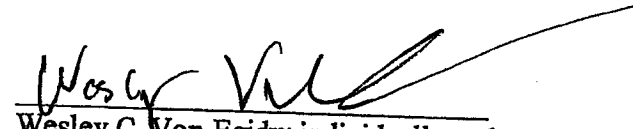
ATTORNEY FOR PLAINTIFF


Barry H. Bloch

Assistant Attorney General
N.C. Department of Justice

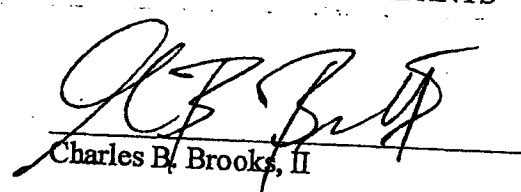
Date: 12/16/2013

DEFENDANTS


Wesley C. Von Egidy, individually and
as authorized agent of Von Egidy, Inc.

Date: 12/11/13

ATTORNEY FOR DEFENDANTS


Charles B. Brooks, II

Date: 12/11/13



STATE OF NORTH CAROLINA

BEFORE THE NORTH CAROLINA
PESTICIDE BOARD
File No. IR2012-32

COUNTY OF WAKE

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, STRUCTURAL PEST
CONTROL AND PESTICIDES DIVISION,

Complainant,

v.

WILLIAM D. HALL,

Respondent.

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. §§ 150B-22 and 150B-41(c) which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, and upon final approval by the North Carolina Pesticide Board (Board), this Settlement Agreement is made between the Structural Pest Control and Pesticides Division of the North Carolina Department of Agriculture and Consumer Services, Complainant, and William D. Hall, Respondent.

1. At all times pertinent to this matter, Respondent was employed by Crabbe Aviation, 784 Foreman Bundy Road, Elizabeth City, North Carolina, and held Aerial Applicator (Pilot) License No. 785.
2. On April 13, 2012, Complainant's inspector investigated a complaint by Dean T. Demartino, 172 Shipyard Road in Camden, Camden County, North Carolina, regarding drift from an aerial application to the field adjacent to his residence.
3. Complainant's inspector met with Mr. Demartino at his residence. Mr. Demartino stated that on April 12, 2012, the field adjacent to his residence was sprayed by an airplane. After the application, Mr. Demartino smelled a strong pesticide odor and noticed spots on his truck.
4. Complainant's inspector contacted George C. Tarkington, the owner of the field adjacent to Mr. Demartino's residence. Mr. Tarkington stated that he contracted with Crabbe Aviation to aerially apply Baythroid XL (β -cyfluthrin), EPA Reg. No. 264-840, a synthetic pyrethroid insecticide, Class II, Warning, and Tilt Fungicide (propiconazole), EPA Reg. No. 100-617, a triazole fungicide, Class II, Warning, to his oats. He said the aerial application was made by the Respondent.
5. On April 16, 2012, Complainant's inspector met with the Respondent at Crabbe Aviation. The Respondent stated that on April 12, 2012, he aerially applied Baythroid XL and Tilt Fungicide to Mr. Tarkington's oat field adjacent to Mr. Demartino's residence.

6. Complainant's inspector collected samples including the following:

PS-02 swab, Mr. Demartino's vehicle
PS-04 vegetation, 77 feet from Mr. Demartino's residence
PS-05 vegetation, Shipyard Road right-of-way (north)
PS-06 vegetation, Shipyard Road right-of-way (south)
PS-07 vegetation, Shipyard Road right-of-way (northwest)
PS-08 vegetation, Shipyard Road right-of-way (southeast)
PS-09 vegetation, target

7. Laboratory analysis of samples PS-02, PS-05, PS-07, PS-08 and PS-09 revealed the presence of β -cyfluthrin and propiconazole.

8. Laboratory analysis of samples PS-04 and PS-06 revealed the presence of propiconazole.

9. During the investigation, Complainant's inspector determined that the Respondent allowed pesticides to drift and/or be deposited within 25 feet of Shipyard Road and within 100 feet of Mr. Demartino's residence.

10. The registered label for Baythroid XL contains the following language:

Do not apply when weather conditions favor drift from treated areas.
Only apply this product if wind direction favors on-target deposition.

The registered label for Tilt Fungicide contains the following language:

To avoid spray drift, do not apply when weather conditions favor drift beyond the target area.

11. As a result of its investigation, Complainant alleges that Respondent, either by act or omission, violated the following provision(s) of the North Carolina Pesticide Law and/or Regulations:

N.C. Gen. Stat. § 143-443(b)(3)---

- (b) It shall be unlawful:

- (3) For any person to use any pesticide in a manner inconsistent with its labeling.

N.C. Gen. Stat. § 143-456(a)(2) and (5)---

- (a) The Board may deny, suspend, modify, or revoke a license issued under this Part if it finds that the applicant or licensee or his employee has committed any of the following acts, each of which is declared to be a violation of this Part:

- (2) Made a pesticide recommendation or application not in accordance with the label registered pursuant to this article;
(5) Violated any provision of this Article or of any rule or regulation adopted by the Board or any lawful order of the Board.

02 N.C. Admin. Code 9L .1005(c) and (e)---

- (c) No pesticide shall be deposited by aircraft on the right-of-way of a public road or within 25 feet of the road, whichever is the greater distance;
- (e) No pesticide shall be deposited within 100 feet of any residence.

12. Each of the above violations of the North Carolina Pesticide Law and/or Regulations is subject to a civil penalty which may be assessed by the Board as follows:

N.C. Gen. Stat. § 143-469(b)---


(b) A civil penalty of not more than two thousand dollars (\$2,000.00) may be assessed by the Board against any person who violates or directly causes a violation of any provision of this Article or any rule adopted pursuant to this Article.

13. The parties are willing to accept a compromise and settlement of the dispute between them and this Agreement is made in order to completely and finally resolve their claims and differences as stated herein upon the following conditions:

- (a) That Respondent agrees to pay the sum of one thousand two hundred dollars (\$1,200.00) to the North Carolina Department of Agriculture and Consumer Services within thirty (30) days of the Board's approval of this Agreement;
- (b) That Respondent denies he is guilty of any willful violation of the North Carolina Pesticide Law or Regulations and his consent to the terms of this Agreement is made in order to timely resolve this matter and shall not be constituted as an admission of guilt, as to any of the violations alleged herein;
- (c) That Respondent acknowledges his right to a formal hearing to resolve this matter and waives said right by consenting to the terms of this Agreement;
- (d) That Respondent agrees that if he fails to pay the total agreed upon sum of one thousand two hundred dollars (\$1,200.00) within thirty (30) days of the Board's approval of this Agreement, this Agreement will constitute a civil penalty assessment of the Board of one thousand two hundred dollars (\$1,200.00) for violations of the above-stated North Carolina Pesticide Law and Regulations;
- (e) That Respondent acknowledges his right to judicial review of the civil penalty assessment in paragraph 13(d) and waives said right by consenting to the terms of this Agreement. Respondent further agrees that the collection procedures outlined in N.C. Gen. Stat. § 143-469(c) may be instituted based on the civil penalty assessment contained in paragraph 13(d) of this Agreement.

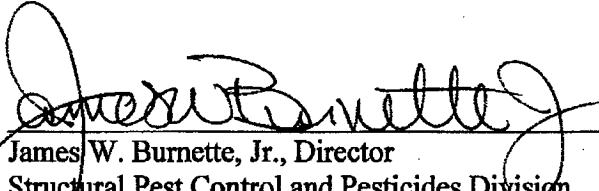
WHEREFORE, the parties to this action hereby notify the Board that it will be unnecessary to hold a hearing regarding this matter and respectfully request approval of this Settlement Agreement.

BY CONSENT:



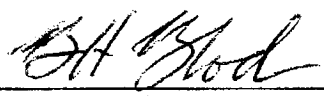
William D. Hall
117 Hawkins Road
Tabernacle, NJ 08088

6/23/2014
Date



James W. Burnette, Jr., Director
Structural Pest Control and Pesticides Division
North Carolina Department of Agriculture and
Consumer Services
1090 Mail Service Center
Raleigh, NC 27699-1090

7/11/2014
Date



Barry H. Bloch
Assistant Attorney General
North Carolina Department of Justice
P.O. Box 629
Raleigh, NC 27602-0629

7/10/2014
Date

APPROVED AND ORDERED FILED,

this the 9th day of September, 2014

NORTH CAROLINA PESTICIDE BOARD

BY: 

Chairman



IR2012-032

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, STRUCTURAL PEST
CONTROL AND PESTICIDES DIVISION,
PESTICIDE SECTION,

Complainant,

v.

William D. Hall,

Respondent,

Supplemental Information

The following individuals were involved in the settlement negotiations of the above-captioned matter:

William D. Hall, Respondent
Patrick N. Farquhar, Eastern Field Manager

STATE OF NORTH CAROLINA

COUNTY OF WAKE

BEFORE THE NORTH CAROLINA
PESTICIDE BOARD
File No. IR2013-34

NORTH CAROLINA DEPARTMENT OF
AGRICULTURE AND CONSUMER
SERVICES, STRUCTURAL PEST
CONTROL AND PESTICIDES DIVISION,

Complainant,

v.

WILLIAM D. HALL,

Respondent.

SETTLEMENT AGREEMENT

PURSUANT TO N.C. Gen. Stat. §§ 150B-22 and 150B-41(c) which express the State's policy that parties shall attempt to mediate and resolve contested matters by settlement or stipulation, and upon final approval by the North Carolina Pesticide Board (Board), this Settlement Agreement is made between the Structural Pest Control and Pesticides Division of the North Carolina Department of Agriculture and Consumer Services, Complainant, and William D. Hall, Respondent.

1. At all times pertinent to this matter, Respondent was employed by Crabbe Aviation, and held Aerial Applicator (Pilot) License No. 785.

2. On June 7, 2013, Complainant's inspector investigated a complaint by Mary Harper, 130 Longhorn Drive, Moyock, Currituck County, North Carolina, regarding an aerial application to the field across from her home that damaged her garden and yard. The field is located along Ranchland Drive.

3. Complainant's inspector met with John W. Decker, who also resides at 130 Longhorn Drive. Mr. Decker stated that on June 1 and June 2, 2013, he observed a yellow airplane spraying the fields along Ranchland Drive. He said he noticed the garden and grass dying on June 3 or 4, 2013.

4. Complainant's inspector inspected the area and noted damage to the garden, grass, mimosa tree, and vegetation in the hedge between the home and the field.

5. Gail Romich, 174 Ranchland Drive, Moyock, North Carolina, also contacted Complainant's inspector to file a complaint. Ms. Romich reported that May 30 or 31, 2013, an aerial application to a corn field across from her home damaged her garden, rose bushes and vegetation. She said she noticed things starting to die on or about June 4, 2013. She also reported she smelled a bad odor and complained of breathing and sleeping problems. She did not seek medical attention.

6. Complainant's inspector met with Ms. Romich at her residence and inspected the area.
7. Complainant's inspector noted damage to her garden, mimosa tree, and rose bushes.
8. Mary J. Plaster, 178 Ranchland Drive, Moyock, North Carolina, also contacted Complainant's inspector to file a complaint regarding damage to her garden. Ms. Plaster reported that on May 29, 2013, she observed a crop duster spraying the field across from her home. She noticed plants in her garden wilting on June 1, 2013. She also reported breathing problems after the application; but did not seek medical attention.
9. Complainant's inspector met with Steve M. Whitaker, who also resides at 178 Ranchland Drive. Mr. Whitaker stated that he had breathing problems after the application; but did not seek medical attention.
10. Complainant's inspector inspected the area and noted damage to the garden.
11. Complainant's inspector determined Justice Family Farms owns the land along Ranchland Drive.
12. Complainant's inspector met with Gil Slagle, District Manager for Southern States, at the farm. Mr. Slagle stated that Southern States contracted with Crabbe Aviation to apply Atrazine 4L Flowable Herbicide (atrazine), EPA Reg. No. 35915-4-60063, triazine herbicide, Class III, Caution; Dual II Magnum Herbicide (S-metolachlor), EPA Reg. No. 100-818, chloroacetamide herbicide, Class III, Caution; and Roundup PowerMAX Herbicide (glyphosate), EPA Reg. No. 524-549, defoliant/desiccant herbicide, Class III, Caution, to the corn.
13. On June 10, 2013, Complainant's inspector met with Matthew Crabbe and the Respondent at Crabbe Aviation in Elizabeth City, North Carolina.
14. The Respondent stated that on May 29 and 30, 2013, he aerially applied Atrazine 4L Flowable Herbicide, Dual II Magnum Herbicide and Roundup PowerMAX Herbicide to the corn along Ranchland Drive.
15. On June 11, 2013, Mr. Crabbe and the Respondent contacted Complainant's inspector to make him aware that pesticides had been applied at Ranchland Drive and Mustang Trail.
16. On June 12, 2013, Complainant's inspector went to the site and inspected the area.
17. Complainant's inspector noted dead vegetation on the ditch bank at Ranchland Drive and Mustang Trail.
18. On June 17, 2013, Complainant's inspector met with Barbara E. Busitzky, 101 Mustang Trail, Moyock, North Carolina. Ms. Busitzky stated that she had applied Crossbow (2,4-D and triclopyr), EPA Reg. No. 62719-260, chlorinated phenoxy/pyridine carboxylic acid herbicide, Class III, Caution, along her side of the road at least six weeks ago.

19. Complainant's inspector determined Ms. Busitzky rents her horse pasture to Barry M. Robertson and supplied him with Nufarm Weedar 64 (2,4-D), EPA Reg. No. 71368-1, chlorinated phenoxy herbicide, Class III, Caution, and her sprayer.

20. Complainant's inspector contacted Mr. Robertson. Mr. Robertson stated that in mid-May he had applied the 2,4-D to the pasture with Ms. Busitzky's sprayer. This application was made before Ms. Busitzky applied Crossbow with her sprayer.

21. Complainant's inspector collected samples including the following:

- PW-01 vegetation, Ms. Harper's garden
- PW-03 vegetation, 62 feet from Ms. Harper's residence and 11.5 feet from Ranchland Drive
- PW-05 vegetation, 34.5 feet from Ms. Romich's residence
- PW-07 vegetation, 102.5 feet from Ms. Plaster's residence and 19.5 feet from Ranchland Drive
- PW-09 vegetation, south ROW for Ranchland Drive, 11.5 feet from Ranchland Drive
- PW-11 vegetation, target
- PW-13 vegetation, southeast ROW for Mustang Trail, 19.5 feet from Mustang Trail

22. Laboratory analysis of sample PW-01 revealed the presence of atrazine and metolachlor. Laboratory analysis of samples PW-05, PW-09 and PW-11 revealed the presence of atrazine and glyphosate. Laboratory analysis of sample PW-07 revealed the presence of atrazine. Laboratory analysis of sample PW-13 revealed the presence of 2,4-D, glyphosate, AMPA, and metolachlor.

23. During the investigation, Complainant's inspector determined that the Respondent allowed pesticides to drift and/or be deposited within 25 feet of Ranchland Road and Mustang Trail and within 100 feet of Ms. Romich's residence.

24. Dr. Henry F. Wade, the Pesticide Section's Environmental Program Manager, reviewed the case file, including the inspector's photographs. Dr. Wade concluded to a reasonable degree of scientific certainty that the damage to some of the vegetables in the three gardens was caused by herbicide drift from the aerial application by William Hall.

25. The registered labels for Atrazine 4L Flowable Herbicide and Dual II Magnum Herbicide contain the following language:

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, . . . non-target crops) is minimal (e.g., wind is blowing away from the sensitive areas).

The registered label for Roundup PowerMAX Herbicide contains the following language:

AVOID CONTACT OF THIS HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, AS SEVERE INJURY OR DESTRUCTION COULD RESULT.

Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation, as minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which application was not intended.

Apply this product only when the potential for drift to adjacent sensitive areas (e.g., residential areas, . . . non-target crops) is minimal (e.g., wind is blowing away from the sensitive areas).

26. As a result of its investigation, Complainant alleges that Respondent, either by act or omission, violated the following provision(s) of the North Carolina Pesticide Law and/or Regulations:

N.C. Gen. Stat. § 143-443(b)(3)---

- (b) It shall be unlawful:
 - (3) For any person to use any pesticide in a manner inconsistent with its labeling.

N.C. Gen. Stat. § 143-456(a)(2), (4) and (5)---

- (a) The Board may deny, suspend, modify, or revoke a license issued under this Part if it finds that the applicant or licensee or his employee has committed any of the following acts, each of which is declared to be a violation of this Part:
 - (2) Made a pesticide recommendation or application not in accordance with the label registered pursuant to this article;
 - (4) Operated in a faulty, careless, or negligent manner;
 - (5) Violated any provision of this Article or of any rule or regulation adopted by the Board or any lawful order of the Board.

02 N.C. Admin. Code 9L .1005(c), (e) and (f)---

- (c) No pesticide shall be deposited by aircraft on the right-of-way of a public road or within 25 feet of the road, whichever is the greater distance;
- (e) No pesticide shall be deposited within 100 feet of any residence;
- (f) No pesticide shall be deposited onto any nontarget area in such a manner that it is more likely than not that adverse effect will occur.

27. Each of the above violations of the North Carolina Pesticide Law and/or Regulations is subject to a civil penalty which may be assessed by the Board as follows:

N.C. Gen. Stat. § 143-469(b)---

(b) A civil penalty of not more than two thousand dollars (\$2,000.00) may be assessed by the Board against any person who violates or directly causes a violation of any provision of this Article or any rule adopted pursuant to this Article.

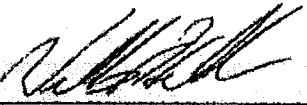
28. The parties are willing to accept a compromise and settlement of the dispute between them and this Agreement is made in order to completely and finally resolve their claims and differences as stated herein upon the following conditions:

- (a) That Respondent agrees to pay the sum of One Thousand Eight Hundred Dollars (\$1,800.00) to the North Carolina Department of Agriculture and Consumer Services in six (6) monthly installments of Three Hundred Dollars (\$300.00) each. Respondent shall pay his first installment on or before December 1, 2015. Respondent shall pay each of the five subsequent payments on or before the first day of each month. Respondent's payments shall be considered to have been paid on time if Respondent sends the payment by U.S. Postal Service or other commercial carrier, prepaid, and the envelope is postmarked on or before the first day of the month in which the payment is due;
- (b) That Respondent acknowledges his right to a formal hearing to resolve this matter and waives said right by consenting to the terms of this Agreement;
- (c) That Respondent agrees that if he fails to pay the sum of One Thousand Eight Hundred Dollars (\$1,800.00) as set forth in the payment terms in subparagraph 28(a), this Agreement will constitute a civil penalty assessment of the Board of the entire unpaid portion of One Thousand Eight Hundred Dollars (\$1,800.00) for violations of the above-stated North Carolina Pesticide Law and Regulations;
- (d) That Respondent acknowledges his right to judicial review of the civil penalty assessment in paragraph 28(c) and waives said right by consenting to the terms of this Agreement. Respondent further agrees that the collection procedures outlined in N.C. Gen. Stat. § 143-469(c) may be instituted based on the civil penalty assessment contained in paragraph 28(c) of this Agreement.



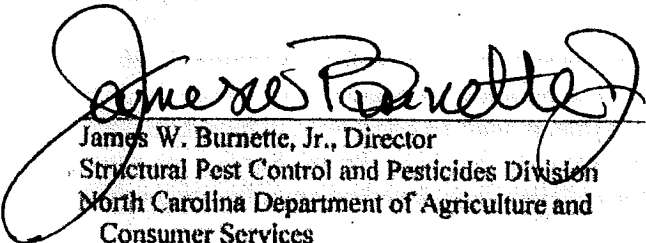
WHEREFORE, the parties to this action hereby notify the Board that it will be unnecessary to hold a hearing regarding this matter and respectfully request approval of this Settlement Agreement.

BY CONSENT:


William D. Hall
Crabbe Aviation
Post Office Box 534
Mechanicsville, Virginia 23111

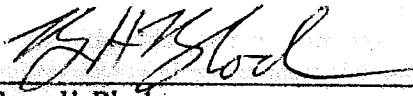
Date

11/6/2015


James W. Burnette, Jr., Director
Structural Pest Control and Pesticides Division
North Carolina Department of Agriculture and
Consumer Services
1090 Mail Service Center
Raleigh, North Carolina 27699-1090

Date

11/10/2015


Barry H. Bloch
Assistant Attorney General
North Carolina Department of Justice
Post Office Box 629
Raleigh, North Carolina 27602-0629

Date

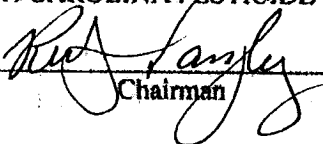
10 NOV 2015

APPROVED AND ORDERED FILED,

this the 10 day of November

NORTH CAROLINA PESTICIDE BOARD

BY:


Chairman



NORTH CAROLINA INDUSTRIAL COMMISSION
RALEIGH, NORTH CAROLINA

RELEASE OF TORT CLAIM UNDER GENERAL STATUTE's 143-291 *et seq.*
I.C. File No. TA-25951; A.G. File No. TC-16-02350

KNOW ALL MEN BY THESE PRESENTS, That I, JOHN WILLOUGHBY, AS MEMBER OF THE WILLOUGHBY-TOWNSEND, LLC, (Plaintiff), being over 18 years of age, for the sole consideration of \$ 22,250.00 (Twenty-Two Thousand Two Hundred and Fifty dollars), \$16,750.00 to be paid by the State of North Carolina and the North Carolina Department of Agriculture & Consumer Services, and the payment whereof being made under the provision of General Statutes 143-291 *et seq.*, and the cancellation of the \$5,500.00 (Five Thousand Five Hundred dollars) debt owed to the North Carolina Department of Agriculture & Consumer Services for services rendered pursuant to Agreement for Prescribed Burning dated December 2, 2013, and Agreement for Prescribed Burning dated August 19, 2014, which debt the Plaintiff contends it does not owe due to damages it alleges were caused by the State of North Carolina as referenced herein, which damages are denied by the State of North Carolina, do hereby release and discharge and by these presents do for myself, ourselves, my, our heirs, executors, administrators and assigns release and forever discharge the State of North Carolina and the North Carolina Department of Agriculture, and their current and former officers, employees, servants, and agents, individually and officially, including but not limited to, Jeff Marshburn, and all other persons and entities, of and from any and all claims, demands, damages, actions, and causes of action of whatever kind or nature, on account of the incident that occurred on or near the 24th day of February 2014, on Riverstone Road Drive, PIN [REDACTED], which is located in Duplin County, North Carolina.

Plaintiff also acknowledges and agree that expenses of any kind or nature whatsoever incurred as a result of damages sustained in said incidents have been paid or will be paid out of these proceeds and Plaintiff agrees to indemnify and hold harmless the parties released hereby from any claims by any person or entity seeking the recovery of expenses. Plaintiff further acknowledges that no lien by any third party exists on the proceeds of this settlement, or that if any valid lien exists, Plaintiff agrees to pay the lien out of proceeds of this settlement, and agree to indemnify and hold harmless the parties being released from any claims by any person or entity seeking the recovery of or enforcement of such liens.

Plaintiff further hereby agrees to indemnify and save harmless the released parties of and from any and all claims of any sort from any party claiming to be subrogated or to have any other type of legal or equitable claim to the proceeds or any part of the proceeds paid in exchange for this release. This indemnification extends to and includes indemnification from all costs and attorney fees that might be incurred as a result of such claim.

Defendant does hereby release and discharge Plaintiff and all other persons and entities related or associated with them, from any and all liability connected with services rendered by it to the Plaintiff from any and all claims, demands, damages, actions, and causes of action of whatever kind or nature, on account of any activities or services performed on their property on Riverstone Road Drive, PIN 3325000583080, which is located in Duplin County, North Carolina, pursuant to Agreement for Prescribed Burning dated December 2, 2013, and Agreement for Prescribed Burning dated August 19, 2014, including but not limited to the payment for any services Defendant claims it rendered to Plaintiff pursuant to those agreements.

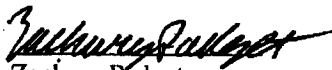
Plaintiff and Defendant understand that this release is made as compromise to avoid expense and to terminate all controversy and/or claims for injuries or damages of whatever nature, known or unknown, including future developments thereof, in compromise of a disputed claim, and it is therefore specifically agreed that this release shall be a complete bar to all claims or suit for injuries or damages of whatsoever nature resulting or to result from said incidents. **Plaintiff hereby agrees to file a Notice of Voluntary Dismissal with Prejudice of this action within 15 days of the receipt of the proceeds of this settlement.**

NORTH CAROLINA INDUSTRIAL COMMISSION
RALEIGH, NORTH CAROLINA


RELEASE OF TORT CLAIM UNDER GENERAL STATUTE's 143-291 *et seq.*
I.C. File No. TA-25951; A.G. File No. TC-16-02350

IN WITNESS WHEREOF, We, have hereunto set my, our, hand(s), this 25 day of October, 2017.

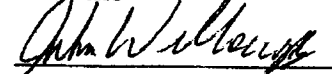
Defendant's Attorney


Zachary Padgett
NC DOJ
P.O. Box 629
Raleigh, NC 27602
State Bar # 46610

Plaintiff's Attorney


Cecil B. Jones
Jones and Jones, P.L.L.C.
Dunn, NC 28335
State Bar #17477

Plaintiffs


John Willoughby
Member of the Willoughby-
Townsend, LLC

NORTH CAROLINA INDUSTRIAL COMMISSION
RALEIGH, NORTH CAROLINARELEASE OF TORT CLAIM UNDER GENERAL STATUTE's 143-291 et seq.
I.C. File No. T-3

KNOW ALL MEN BY THESE PRESENTS, that I, Miguel Reyes, for the sole consideration of Seventy-five thousand and 00/100 Dollars (\$75,000.00) to be paid to me by the State of North Carolina, North Carolina Department of Agriculture, Gordon Vincent Wyche, Jr. and Travelers Property Casualty Company of America, the payment whereof being made under the provision of General Statutes 143-291 et seq., do hereby release and discharge and by these presents to for myself, my heirs, executors, administrators and assigns release and forever discharge the State of North Carolina, North Carolina Department of Agriculture, Gordon Vincent Wyche, Jr. and Travelers Property Casualty Company of America, their officers, employees, servants, and agents of and from any and all claims, demands, damages, actions, cause of action of whatever kind or nature, on account of an accident which occurred on or about the: the 20th day of March, 2014 on NC Highway 903 near Hamilton, NC, in Martin County at or about 4:30pm.

I also acknowledge and agree that all medical and/or chiropractic bills of any kind or nature whatsoever incurred by me as a result of injuries that I sustained in said accident have been paid or will be paid out of these proceeds and I agree to indemnify and hold harmless the parties released hereby from any claims by any person or entity seeking the recovery of unpaid bills for medical and/or chiropractic treatment provided to me. I further acknowledge that to the extent any liens by any third party exist on the proceeds of this settlement, I agree to indemnify and hold harmless the parties being released from any claims by any person or entity seeking the recovery of or enforcement of such liens.

I further hereby agree to indemnify and save harmless the released parties of and from any and all claims of any sort from any party claiming to be subrogated or to have any other type of legal or equitable claim to the proceeds or any part of the proceeds paid in exchange for this release. This indemnification extends to and includes indemnification from all costs and attorney fees that might be incurred as a result of such claim.

I understand that this release is made as a compromise to avoid expense and to terminate all controversy and/or claims for injuries or damages of whatever nature, known or unknown, including future developments thereof, in promise of a disputed claim, and it is therefore specifically agreed that this release shall be a complete bar to all claims or suit for injuries or damages of whatsoever nature resulting or to result from said accident.

IN WITNESS WHEREOF I, have hereunto set my, hand(s), this 26 day of November, 2014

Andie Gomez P. (witness)

Miguel Reyes (claimant)

Address


Address

Claimant followed up with Dr. Marsigli of Ortho Associates of Nash from 4/22/14 to 8/05/14 until his eventual discharge from medical care.

7. Medicals Expense paid: **\$24,014.70 incurred**
8. Property Damage paid: **\$3,173.08**

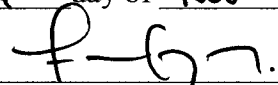
IN TESTIMONY WHEREOF, the said (Miguel Reyes) has hereunto set his/her hand and seal, this
26 day of November 2014.

Subscribed and sworn to before me



(Signature of Miguel Reyes)

This 26 day of Nov, 2014.



(Signature and Seal of Clerk of Court or Notary Public)

MY COMMISSION EXPIRES 4-3-19